

4. RiverPro Operations

This chapter explains the operations of RiverPro. The screens on the following pages are used in the operation of the RiverPro component of the WHFS. Each figure is annotated and is self-explanatory. Where appropriate, a source screen(s) is provided in the background as a reference.

RiverPro Notes

RiverPro provides the forecaster with a series of default products that can be viewed, edited, and issued based on the current hydrologic situation. In addition, RiverPro gives the forecaster the capability to develop specific products that can be saved for future use and then viewed, edited, and issued when needed. For either the default or specific products, their issuance is dependent on the **current** hydrologic situation (observed and/or maximum forecast) and the availability of up-to-date data for the appropriate collection stations.

The format and content of RiverPro products can be edited using the **Edit** and **Modify** Options, which can be accessed through the **RiverPro Root Window** (see RiverPro Operational and Functional Guides).

Upon initialization of the program, RiverPro computes recommendations after extracting observed and forecast stage data. While the program is running, new data may have arrived that were not considered in the recommendations. To ensure that recommendations are based on current data, the **Recompute** Option should be used periodically while logged in to RiverPro (see RiverPro Functional Guide).

RiverPro provides the option of issuing a product immediately after creating/editing the product. Care must be taken not to overwrite the existing product when saving a file (only one product can be saved).

RiverPro assumes that Terminating Flood Statement (FLS) products will be issued when appropriate. If a Flood Warning (FLW) or an FLS is not formally terminated for all forecast points with the issuance of a Terminating FLS, subsequent RiverPro recommendations may reference a Terminating FLS even though the forecast point is no longer in flood or the original event occurred so long ago that a Terminating FLS is no longer meaningful. To ensure that a misleading product is not recommended, the **Clear Terminating FLS** Option should be used when needed (see RiverPro Functional Guide).

RiverPro not only recommends which product to issue and which forecast points to include, it also recommends the expiration data and time and issuance number for the product. For FLW and FLS products, the default expiration time is 12 hours from issuance. For an RVS, the default expiration time is 24 hours from issuance. Each time a product is issued for the same hydrologic event, the issuance number automatically increases by one. When RiverPro issues a Terminating FLS, the issuance number reverts to zero. The expiration date and time and the issuance number can be changed by using the **Product Header Settings** Option (see RiverPro Functional Guide).

RiverPro Notes (cont.)

RiverPro analyzes maximum forecast and observed data, then determines derived values from stage time series data. Using this derived information, RiverPro automatically determines the recommended product to issue and the recommended forecast points to include.

Some screens in RiverPro refer to various data codes for some parameters. These codes are as referenced in *Standard Hydrometeorological Exchange Format, Weather Service Hydrology Handbook No. 1*.

This manual addresses the basic functions of RiverPro. Other functional aspects of RiverPro such as creating and modifying templates (including default templates) are described in the *RiverPro Reference Manual* in Appendix A. RiverPro template formats have many different features available such as data types and values used (e.g., variable maximum or minimum) and stations to list (forecast and non-forecast stations).

RiverPro creates river products that are constructed and formatted properly for the auto-voice **NOAA Weather Radio (NWR)**. Users can set up templates for **NWR** products and **non-NWR** products separately.

RiverPro provides the capability to generate four default products (for both NWR and non-NWR products) - River Statement (RVS), Flood Statement (FLS), Terminating Flood Statement (FLS), and Flood Warning (FLW). Each product is composed of a series of sections and subsections that display various data and information, dependent on the product and selected forecast points. The sections and subsections in the default products are as follows.

- Product Header
- Summary of Groups
- Hydromet Basis
- Tabular
- Call-to-Action
- Forecast Point Info
 - Data Roundup
 - Impact Statement
 - Crest Comparison

RiverPro default products each have a defined format and content, which can be edited if needed. Not all sections and subsections are provided in each default product. The following table defines the different product sections and subsections and shows the format of each product.

RiverPro Product Formats		Section/Subsection Included in RiverPro Default Product Type							
Product Section/Subsection	Section/Subsection Definition	RVS		FLS		Term. FLS		FLW	
		non-NWR	NWR	non-NWR	NWR	non-NWR	NWR	non-NWR	NWR
Product Header	Product header information (e.g., Universal Generic Code [UGC], issuing office identifiers, product type identifier, product issuance number, expiration date and time, issuance date and time)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Summary of Groups	A narrative that briefly summarizes the hydrologic conditions on the river basins for the included groups of forecast points and/or defines the forecast points within the river groups	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Hydromet Basis	A narrative that describes the hydrometeorological basis for the current situation; typically, this discussion is manually entered (Default products provide a prompt to enter this information)	No	No	Yes	No	Yes	No	Yes	No
Tabular	A tabular list of included river groups and forecast points along with flood stage reference, observed stage (and date and time), and 3-day stage forecast	Yes	No	Yes	No	Yes	No	Yes	No
Call-to-Action	Statements that describe the general precautionary actions the public should take in a flood situation; five templates are available, and each product type has different default template(s)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Data Roundup	A narrative summary of the observed and forecast river stage conditions referencing impacted rivers and forecast points	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

RiverPro Product Formats		Section/Subsection Included in RiverPro Default Product Type							
Product Section/Subsection	Section/Subsection Definition	RVS		FLS		Term. FLS		FLW	
		non-NWR	NWR	non-NWR	NWR	non-NWR	NWR	non-NWR	NWR
Impact Statement	A description of potential flood impacts based on the hydrologic situation (specific areas affected and probable impact of the flood)	No	No	Yes	No	No	No	Yes	No
Crest Comparison	A comparison of observed or forecast floods to historical floods	No	No	Yes	No	No	No	Yes	No

Troubleshooting RiverPro

Some of the errors associated with the use of RiverPro will be displayed in a pop-up window or an error dialog shown on the screen. The application then continues. For most RiverPro errors, the Product Issuance Log and Message Log windows may indicate the source of the problem. The RiverPro Reference Manual (Appendix A) can also be used to evaluate RiverPro errors.

Getting Started

Method One

- 1) From the workstation D2D screen, locate the mouse pointer on a dead area (no windows displayed) and single click the right mouse button. The **System Control Menu** will be displayed.
- 2) Click left mouse button on **Hydro Apps**. The **Hydrologic Applications Menu** will be displayed.
- 3) Click left mouse button on **RiverPro** in the **Hydrologic Applications Menu**. The **RiverPro Root Window** will be displayed.

Method Two

- 1) From the D2D display, click on **Surface** on the Menu Bar.
- 2) Click left mouse button on **Hydro Apps**. A menu will be displayed.
- 3) Click left mouse button on **RiverPro**. The **RiverPro Root Window** will be displayed.

RiverPro Windows

The following pages present the various windows used in the operation of RiverPro. A list of these windows is provided below.

RiverPro Windows

Window	Use	Page
RiverPro Root Window	Starting point to access all operations within RiverPro	4-9
Forecast Points to Include (RiverPro Root Window)	Select forecast groups and points to include in the product	4-10
Create Option (Text Editor) Window	Create and edit a product	4-12
Settings Option Window	Modify existing product generation settings (initial window for modifying settings)	4-18
Product Header Settings Window	Modify existing product generation settings for the product header	4-19
Summary Section Settings Window	Modify existing product generation settings (prologue, summary text) for the river forecast groups	4-20
Hydromet Basis Section Settings Window	Modify existing product generation settings for the basis section of the product	4-21
Tabular Section Settings Window	Modify existing product generation settings for the tabular section of the product	4-22
Call-to-Action Section Settings Window	Modify existing product generation settings for the call-to-action section of the product	4-23
Data Roundup Subsection Settings Window	Modify existing product generation settings for the data roundup subsection (part of Forecast Point Info) of the product	4-24
Impact Statement Subsection Settings Window	Modify existing product generation settings for the impact statement subsection (part of Forecast Point Info) of the product	4-25
Crest Comparison Subsection Settings Window	Modify existing product generation settings for the crest comparison subsection (part of Forecast Point Info) of the product	4-26
VTEC Settings Window	Review previous VTEC events and propose new VTEC information for segmented products	4-27

RiverPro Windows

Window	Use	Page
Save Product Settings Window	Save a new product section/subsection definitions set for future use	4-28
Select Office Window	Specify the office for which products are to be generated	4-29
Stage/Discharge Information Window	View current observed, forecast, and threshold (E-19) stage data for a selected point	4-31
Recommendation/Previous Product Information Window	View RiverPro recommended products, forecast points for various products, recommendation rationale, and update recommendations; list previous products; and clear a terminating flood statement	4-32
Reference Information Window	View previously issued products for content or for comparison to products to be issued	4-33
RiverPro Product Log Window	View a listing of previously issued products generated by RiverPro	4-35
Message Log Window	View the general status information (indicating specific steps of the current RiverPro execution) as well as messages in the Product Issuance Log	4-36
Product Issuance Log Window	View the status messages generated by the issuance of products, including warning messages that indicate possible detrimental and unrecoverable errors	4-37

RiverPro Root Window - Starting point to access all operations within RiverPro, to define products to issue (left portion of window), and to select river groups and points to be contained in a product (right portion of window).

Menu Bar

The RiverPro recommended product type will be highlighted

A user-defined product can also be generated by *Clicking* on the desired product type

NWR refers to NOAA Weather Radio auto-voice products

Selected office and RiverPro recommended product type

Product to Generate				Forecast Groups/Points for RVS, FLS, FLW	
Category	Id	NWR	Description	Id	Name
RVS	CCCCNNXXXX	RVS	-	2G9	SOMERSET COUNTY AIRP
RVS	CCCCNNXXXX	RVS	- jen test river Stater	KITH2	KITZMILLER
RVS	CCCCNNXXXX	RVS	- sept test river Stater	LUK2	LUKE
RVS	CCCCNNXXXX	RVS	- test river Statentent	CHCM2	HILLS CREEK/CUMBERLAND
RVS	CCCCNNXXXX	RVS	- test river Statentent	CBEM2	CUMBERLAND
RVS	KLWXRVSLLMX	RVS	- test river Statentent	South Branch Potomac	
RVS	CCCCNNXXXX	RVS	- DATA POINTS	FKLW2	FRANKLIN
FLT	CCCCNNXXXX	FLS	- Terminating Flood St	PETW2	PETERSBURG
FLS	CCCCNNXXXX	FLS	- FOR OPERATIONAL USE	MOFW2	MOOREFIELD
FLS	CCCCNNXXXX	FLS	- Flood Statement Def	SPRW2	SPRINGFIELD
FLW	CCCCNNXXXX	FLW	- TEST FOR CREST (FF,)	Potomac Basin Abv Harpers Ferry	
FLW	CCCCNNXXXX	FLW	- FLW - FLW - FLW -	PAW2	PAW PAW
FLW	CCCCNNXXXX	FLW	- Flood Warning Default	HNC2	HANCOCK
XXX	CCCCNNXXXX	HADS	Summary	WLL2	WILLIAMSPORT
RVA	KLWXRTPLMX	RTP	- test RTP Product	FAVM2	FAIRVIEW
RVA	CCCCNNXXXX	RVA	- River and Rainfall	MBGW2	MARTINSBURG
NRK	KLWXRKRLMX	RVS	- test river Statentent	SHEW2	SHEPHERDSTOWN
RVS	CCCRVSXXXX	NWR	NWR River Statement Default	SACH2	SHARPSBURG
FLT	CCCFLSXXXX	NWR	NWR Terminating Flood Stater	Shenandoah Basin	
FLS	CCCFLSXXXX	NWR	NWR Flood Statement Default	HAYV2	WAYNESBORO
FLW	CCCFWXXXX	NWR	NWR Flood Warning Default	LYHV2	LYNNWOOD
				FROV2	FRONT ROYAL
				COOV2	COOTES STORE
				STGV2	STRASBURG
				MILW2	MILLVILLE

Office: LWX Recommended: RVS

Buttons: All, Recomm for Current Product, Clear

Notes: Separate templates can be set up for NOAA Weather Radio (NWR) and non-NWR products.

RiverPro Root Window (Forecast Points to Include) - Use the right portion of the Root Window to select the forecast groups and points to include in the chosen product.

Product to Generate

Category	Id	NWR	Description
RVS	CCCCNNNNXX	RVS	-
RVS	CCCCNNNNXX	RVS	- jen test river State
RVS	CCCCNNNNXX	RVS	- sept test river State
RVS	CCCCNNNNXX	RVS	- test river Statement
RVS	CCCCNNNNXX	RVS	- test river Statement
RVS	KLHXRVSFLW	RVS	- test river Statement
RVS	CCCCNNNNXX	RVS	- DATA POINTS
FLT	CCCCNNNNXX	FLS	- Terminating Flood St
FLS	CCCCNNNNXX	FLS	- FOR OPERATIONAL USE
FLS	CCCCNNNNXX	FLS	- Flood Statement Defe
FLS	KLHXRFLSLW	FLS	- TEST FOR CREST (FF,)
FLW	CCCCNNNNXX	FLW	- FLW - FLW - FLW -
FLW	CCCCNNNNXX	FLW	- Flood Warning Default
XXX	CCCCNNNNXX	HADS	Summary
RVA	KLHXRTPPLW	RTP	- test RTP Product
RVA	CCCCNNNNXX	RVA	- River and Rainfall
WRK	KLHXRKLW	RVS	- test river Statement
RVS	CCCRVVSXXX	NMR	NMR River Statement Default
FLT	CCCFLSXXX	NMR	NMR Terminating Flood State
FLS	CCCFLSXXX	NMR	NMR Flood Statement Default
FLW	CCCFLWXXX	NMR	NMR Flood Warning Default

Office: LWX Recommended: RVS

Forecast Groups/Points for RVS,FLS,FLW

Id	Name	Recommended Product
2G9	- SOMERSET COUNTY AIRP	RVS - NO DATA
KITH2	- KITZMILLER	RVS - NO DATA
LUK2	- LUKE	RVS - NO DATA
CHM2	- HILLS CREEK/CUMBERLAND	RVS - NO DATA
CBM2	- CUMBERLAND	RVS - NO DATA
South Branch Potomac		
FKL2	- FRANKLIN	RVS - NO DATA
PETH2	- PETERSBURG	RVS - NO FLOODING
MOF2	- MOOREFIELD	RVS - NO DATA
SPR2	- SPRINGFIELD	RVS - NO DATA
Potomac Basin Abv Harpers Ferry		
PAM2	- PAW PAW	RVS - NO DATA
HNK2	- HANCOCK	RVS - NO DATA
MLM2	- MILLIAMSPORT	RVS - NO FLOODING
FAV2	- FAIRVIEW	RVS - NO DATA
MBG2	- MARTINSBURG	RVS - NO DATA
SHE2	- SHEPHERDSTOWN	RVS - NO DATA
SAC2	- SHARPSBURG	RVS - NO DATA
Shenandoah Basin		
MAY2	- HAYNESBORO	RVS - NO FLOODING
LYN2	- LYNNWOOD	RVS - NO FLOODING
FR02	- FRONT ROYAL	RVS - NO DATA
COO2	- COOTES STORE	RVS - NO FLOODING
STG2	- STRASBURG	RVS - NO FLOODING
MIL2	- HILLVILLE	RVS - NO DATA

All Recomm for Current Product Clear

Click on River Groups or Points to include in the selected product

By Clicking **Recommended for Current Product** (bottom of display), RiverPro River Group and Point recommendations for the currently selected product will be highlighted

Click **All** to select all River Groups/Points
Click **Recommended for Current Product** to have RiverPro select River Groups/Points for selected product
Click **Clear** to clear selections.

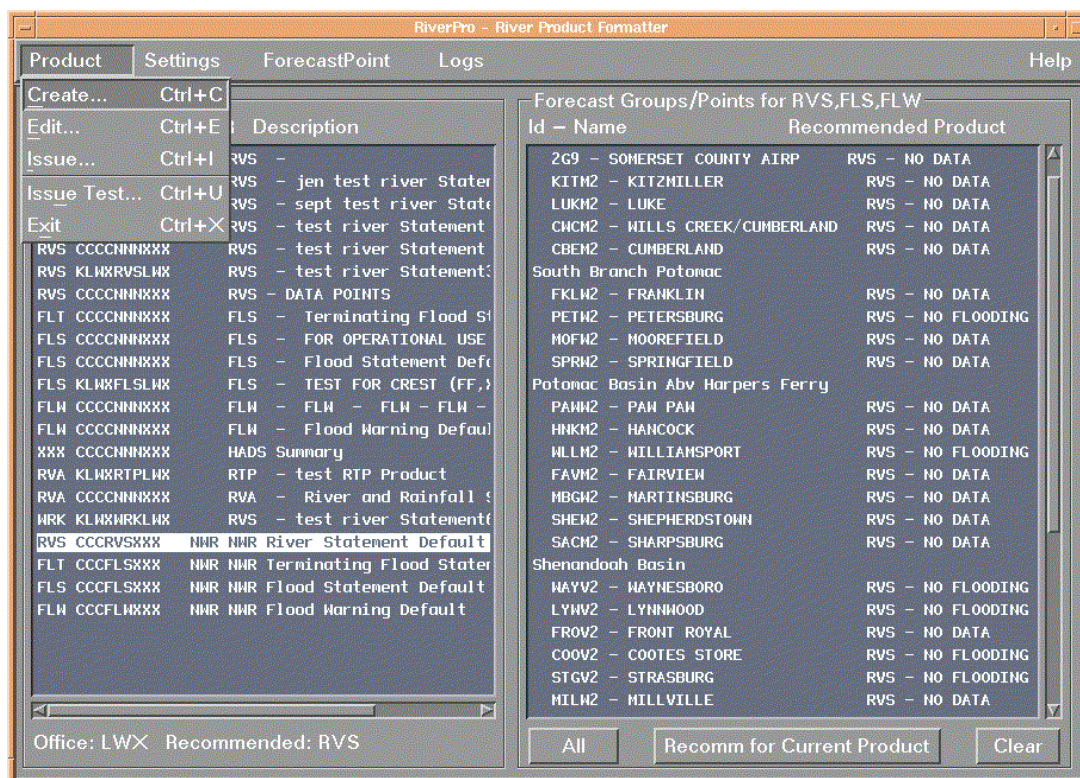
Notes:

RiverPro recommended River Groups and Points are selected based on up-to-date data only (there are no default groups and points for a given product, including River Statements; default groups and points can be defined by customizing the product generation settings).

The display of forecast groups and forecast points with the groups can be ordered in HydroBase. The order of forecast groups and forecast points within the groups can be set, and that order is then shown in the RiverPro display and can be used for the ordering of points and groups in the generated products.

The primary stage parameter for each forecast point [e.g., river stage (HG), lake elevation (HL)] can also be set in HydroBase.

RiverPro Root Window (Product selected from the Menu Bar) - Use this selection to create, edit, and issue products.

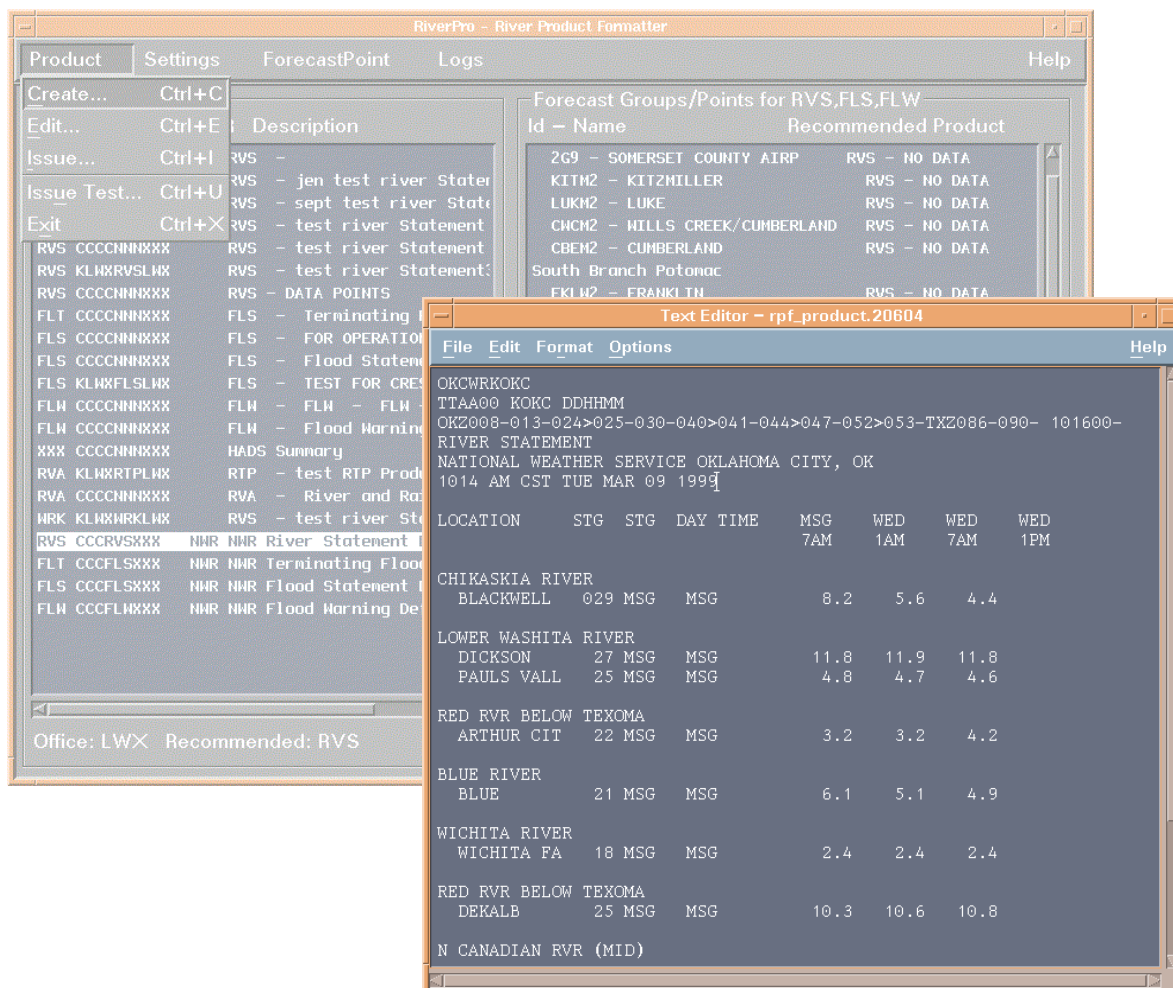


Access this selection from the **Root Window** by *Clicking* on **Product**.

Notes:

- Use **Create** to create a product for the product type and River Group/Points selected in the **RiverPro Client Window** and the product generation settings selected through the **Settings** option (discussed later). The RiverPro recommended options can be used to create a product, or the product can be manually edited.
- Use **Edit** to review and edit previously created products.
- Use **Issue** to send the most recently created product through the NWS communication system.
- Use **Issue Test** to write the most recently created product into a different database on the local AWIPS system for review.
- Use **Exit** to exit from the RiverPro session.

Create Option - Use this selection to create (and edit) a product listed in the **Product to Generate** portion of the **RiverPro Root Window** Text Display.



Access this selection from the **Root Window** by *Clicking* on **Product** then on **Create**.

Notes:

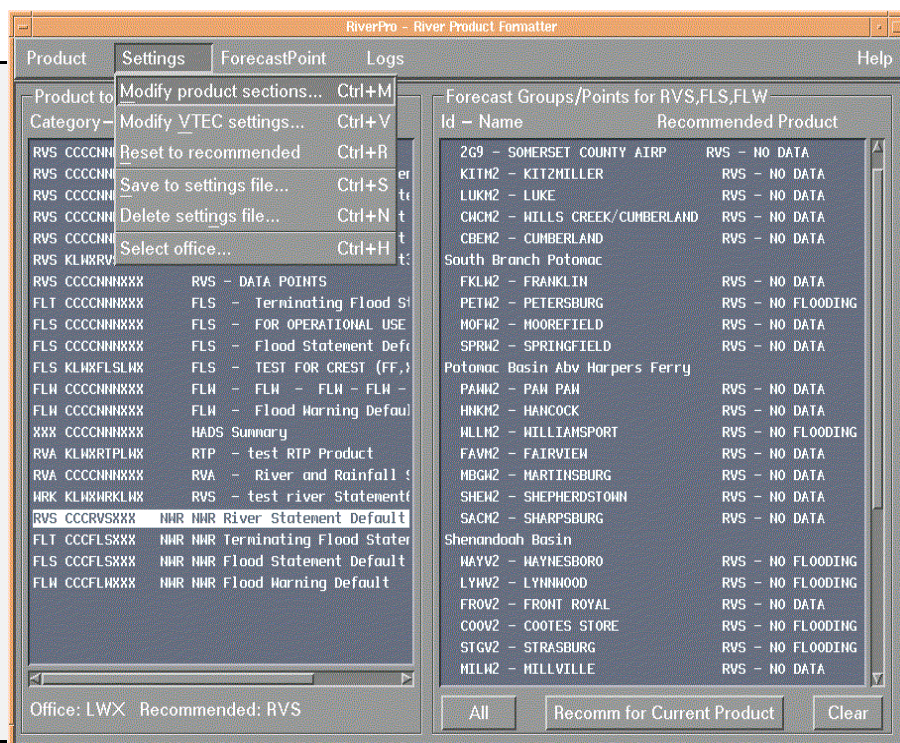
Shown is a default product displayed in the text editor for a RIVER STATEMENT with RiverPro recommendations.

Once **Create** is selected, a screen similar to the above will be displayed. This product is generated based on the product and the recommended river groups/points (or manually selected) and parametric settings selected in the **Settings Windows** (discussed later).

The product can be fully edited and saved (by overwriting the existing file or as a new file) using the File, Edit, Format, and Options menus. The saved file can then be re-edited and issued in the future.

RiverPro Root Window (Settings selected from the Menu Bar) - Use this selection to modify existing product generation settings for a product listed in the **Product to Generate** portion of the **RiverPro Root Window** Text Display. The product generation settings dictate the format and content of the product.

Use **Modify product sections** to display various screens to change product generation settings. Use **Modify VTEC settings** to review previous VTEC events and to propose new VTEC information. Use **Reset to recommended** to return all modified settings, products, and river groups/points to the RiverPro recommended values (also occurs automatically upon exiting the RiverPro session. Use **Save to settings file** to save any modifications as a new product. (The new product will then be listed in the **Product to Generate** portion of the **RiverPro Root Window** Text Display for easy reference for future use.) Use **Delete settings file** to delete the selected product. Use **Select office** to specify the office for which products are to be generated.



Access this selection from the **Root Window** by *Clicking on Settings*.

Notes: Default products cannot be deleted using the **Delete settings file** option.

RiverPro Settings Options - Modify Product Sections

The **Settings** selection - **Modify product sections** option, shown in the following nine screens, allows the forecaster to change the section/subsection settings that control the format and content of the products generated by RiverPro. These modified settings can then be saved for future use, if desired, using the **Save to settings file** option under **Settings**. Various specialized products can be designed and saved and used as needed along with the RiverPro default products. Optimally, the specialized products would be set up after the WHFS is first installed with little need to further use the **Modify product sections** option.

Selection of the **Modify product sections** option provides a series of screens for viewing and changing the various section/subsection settings, including the selection of default templates to be displayed in the product. The **Modify product sections** option also can be used to change the order in which the sections/subsections appear in the product. Most templates cannot be edited in **Modify product sections**, only viewed and selected for use. However, the text of the selected template(s) can be edited through **Create** or **Edit** using **Product** in the **Menu Bar**.

Before using the **Modify product sections** option, a product must be identified in the **Product to Generate** portion of the **RiverPro Root Window** Text Display. River Groups/Points must also have been selected by using the **Recommended for Current Product** option (RiverPro recommendations for the selected product) or by manual selection.

Brief descriptions of the product generation settings that can be changed using the **Modify product sections** option are shown in the following table. Product sections/subsections were defined previously in this manual. Screens for each product section/subsection are shown following the table.

Modify Settings Options

Product Section/Subsection	Modify Option Function
Product Header	View and select the header template (as with all templates, the displayed header template itself is read only, no edits permitted). Edit the product expiration date and time and product issuance number.
Summary of Groups (River Forecast Groups)	View and select the default templates for Prologue and Body of Summary Section. Apply a Summary Section template to selected river forecast groups.
Hydromet Basis	View default templates for displaying reminder to insert the hydrometeorological basis for the current situation in the product or for displaying general text for the basis section. Select default message template (actual basis will have to be inserted manually in the product using the text editor through Create or Edit under Product on the Menu Bar).

Modify Settings Options

Product Section/Subsection	Modify Option Function
Tabular	<p>View default templates for displaying observed and maximum forecast stage data.</p> <p>Select templates to use and select which River Forecast Points to include in the tabular section of the product.</p>
Call-to-Action	View and select default call-to-action templates to include in the product.
Data Roundup	View and select default data roundup templates to include in the product.
Impact Statement	<p>View and select impact statement(s) to be displayed in the product. RiverPro provides a series of default impact statements that can be issued based on the observed or forecast hydrologic situation.</p> <p>The Impact Statement Window has a variety of options available to modify the impact statement. The window allows the editing of parameters that determine the recommended impact statements displayed in the product. Once the parameters are edited, the recommended impact statements will be recomputed.</p> <p>The impact statement for a given forecast point is included only if RiverPro is able to find an impact statement within the range of the designated search parameters. These parameters include the Stage Window, Maximum Depth Below Flood Stage, and Search Type.</p> <p>The limits of the Stage Window are defined as an offset from the Reference Stage. (The Reference Stage can be the current observed stage, the maximum forecast stage, or the maximum of both and can be selected by the user with a pull-down menu in the Impact Statement window.) The Stage Window is selected with sliders in the Impact Statement window.</p> <p>The impact statement is also screened based on the Maximum Depth Below Flood Stage. This prevents using impact statements for very low stages but still allows for a statement for locations impacted by stages below flood stage such as recreation areas. (Continued on the next page.)</p>

Modify Settings Options

Product Section/Subsection	Modify Option Function
Impact Statement (cont.)	<p>The Maximum Depth Below Flood Stage <u>and</u> the Stage Window settings must be met to define a statement.</p> <p>Two impact statement Search Types are available - Closest in Stage Window and Highest in Stage Window. Closest in Stage Window provides the impact statement closest to the reference stage and still within the Stage Window while Highest in Stage Window provides the highest impact statement within the stage window.</p> <p>Impact statements are also screened on the basis of seasonal requirements. Each impact statement has an associated season of the year for which it applies. The seasonal requirement is set in HydroBase and can be viewed in HydroView (Impact Statement Window) or in HydroBase. If the current day of the year does not fall within the season defined for the impact statement, the statement is not considered for display in the product.</p>
Crest Comparison	<p>View and select comparisons to historical floods to be displayed in the product. RiverPro provides a series of default comparison statements that can be issued based on the observed or forecast hydrologic situation.</p> <p>The Crest Comparison Window has a variety of options available to modify the comparison statement. The window allows the editing of parameters that determine the recommended comparison statements displayed in the product. Once the parameters are edited, the recommended historical flood statements will be recomputed.</p> <p>The historical flood comparison statement for a given forecast point is included only if RiverPro is able to find an historical crest and date within the range of the designated search parameters. These parameters include the Stage Window, Maximum Depth Below Flood Stage, Year Lookback, and Search Type.</p> <p>The limits of the Stage Window are defined as an offset from the Reference Stage. (The Reference Stage can be the current observed stage, the maximum forecast stage, or the maximum of both and can be selected by the user with a pull-down menu in the Crest Comparison window.) The Stage Window is selected with sliders in the Crest Comparison window.</p>

Modify Settings Options

Product Section/Subsection	Modify Option Function
Crest Comparison (cont.)	<p>The historical flood comparison statement is also screened based on the Maximum Depth Below Flood Stage. This prevents using comparison statements for very low stages. The Year Lookback setting is the number of years to review before the current year.</p> <p>Five comparison statement Search Types are available - Recent in Stage, Year Window; Closest in Stage, Year Window; Recent in Stage Window; Closest in Stage Window; and Highest in Stage Window. For example, to obtain the historical crest that lies within both the stage and year offsets - choose Recent in Stage, Year Window; to select the crest that is only within the stage window - choose Recent in Stage Window.</p>

Settings Option Window (Modify Product Sections Initial Screen) - Use this selection to modify existing product generation settings for default products and to develop new products. The product generation settings dictate the format and content of the product.

Click on text buttons to access screens to modify the selected setting

Click on 1st, 2nd, 3rd... buttons to arrange order of appearance of product sections and subsections

To display a section or subsection in the product, toggle on associated 1st, 2nd, 3rd... buttons

Select order for Forecast Point subsections only if Forecast Point Info is selected above

In the **Product Type** section, toggle on **NOAA Weather Radio** (NWR) or non-NWR (**Official**) to select the default product type. **Official** products may be designated as **Non-segmented** or **Segmented**. **Segmented Official** products may be segmented by **County**, by **Single Forecast Point**, or by **Group of Forecast Points** and may include **VTEC** event lines or not.

Click Apply to incorporate changes (window stays open)

Click Close to close the window (doesn't save changes - use Apply prior to Close to keep the changes)

Access this selection from the **Root Window** by *Clicking* on **Settings** then on **Modify product sections**.

Notes:

This is the initial screen used for modifying product generation settings. From this screen, additional screens can be accessed to make changes to settings such as Product Headers and Call-to-Action statements. This screen can also be used to change the order in which the various sections and subsections appear in the product. Not all settings can be modified for each product. Those settings that cannot be modified will be greyed-out on the screen or not displayed.

ALL CHANGES MADE THROUGH MODIFY PRODUCT SETTINGS APPLY ONLY TO THE CURRENT RIVERPRO SESSION. UNLESS THE SAVE TO SETTINGS FILE OPTION IS USED, ALL CHANGED SETTINGS WILL BE LOST, AS RIVERPRO REVERTS TO THE DEFAULT SETTINGS EACH TIME THE APPLICATION IS STARTED.

Product Header Settings Window - Use this selection to modify existing product generation settings for the product header.

Example Product Header

```

Text Editor - riverpro.out.7037
File Edit Format Options Help
OKCWRKOKC
TTAA00 KOKC DDHMM
OKZ018>020-026-180400-
RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
1005 AM CST WED DEC 17 1997

THE CURRENT WEATHER IS DOMINATED BY A [...]. THIS WEATHER SYSTEM
WILL PRODUCE RAINFALL AMOUNTS RANGING FROM [...]. THE EXTENDED
OUTLOOK IS FOR [...].

LOCATION      FLD  OBSERVED      FORECAST 7AM
STG  STG  DAY TIME    THU    FRI    SAT
DEEP FORK RIVER
WARWICK      16 MSG      MSG      MSG      MSG
KINGFISHER CREEK
KINGFISHER   20 MSG      MSG      MSG      MSG
KINGFISHER   24 MSG      MSG      MSG      MSG
LOWER CIMARRON RIVER
DOVER        17 MSG      MSG      MSG      MSG
GUTHRIE      14 MSG      MSG      MSG      MSG
RIPLEY       17 MSG      MSG      MSG      MSG

FOR THE DEEP FORK RIVER AT WARWICK, NO OBSERVED STAGE IS AVAILABLE.
.
DO NOT DRIVE CARS THROUGH FLOODED AREAS...STAY TUNED TO
DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO...

```

Product Header templates can be viewed using the View option or edited using the Edit Template File option

Expiration date and time and issuance number can be modified. Expiration dates in the past cannot be entered.

Access this selection from the **Root Window** by *Clicking* on **Settings, Modify product sections, Product Header**.

Notes:

- An example product is shown at the top, the Product Header Window at the bottom.
- After making any edits, *Click* Apply to incorporate changes (the window remains open).
- To close the window, *Click* Close (does not save changes - use Apply prior to Close to incorporate changes).

Summary Section Settings Window - Use this selection to modify existing product generation settings (prologue, summary text) for the river forecast groups.

Example summary text section (default selected for all groups)

Text Editor - riverpro.out.7157

File Edit Format Options Help

```

OKCWRKOKC
TTAA00 KOKC DDHMM
OKZ018>020-026-180500-
RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
1133 AM CST WED DEC 17 1997

FOR THE DEEP FORK RIVER, THE FOLLOWING LOCATIONS ARE INCLUDED:
WARWICK. FOR THE KINGFISHER CREEK, THE FOLLOWING LOCATIONS ARE
INCLUDED: KINGFISHER AND KINGFISHER. FOR THE LOWER CIMARRON RIVER,
THE FOLLOWING LOCATIONS ARE INCLUDED: DOVER, GUTHRIE, AND RIPLEY.

...INSERT BASIS SECTION HERE!!!!...

LOCATION      FLD  OBSERVED  FORECAST 7AM
            STG   STG   DAY TIME   THU    FRI    SAT
DEEP FORK RIVER
WARWICK      16 MSG    MSG      MSG     MSG     MSG
KINGFISHER CREEK
KINGFISHER   20 MSG    MSG      MSG     MSG     MSG
KINGFISHER   24 MSG    MSG      MSG     MSG     MSG
LOWER CIMARRON RIVER
DOVER        17 MSG    MSG      MSG     MSG     MSG
GUTHRIE      14 MSG    MSG      MSG     MSG     MSG
RIPLEY       17 MSG    MSG      MSG     MSG     MSG

FOR THE DEEP FORK RIVER AT WARWICK, NO OBSERVED STAGE IS AVAILABLE.

FOR THE KINGFISHER CREEK ABOVE KINGFISHER, NO OBSERVED STAGE IS

```

Select Prologue for Summary Section

Prologues applied only for Flood Statements and Flood Warnings

Prologue consists of 'This Product includes the following rivers <list of rivers>'

The Prologue screen includes phrases that are NOT specific to a given forecast group.

Select River Forecast Group to apply selected template

The body includes phrases for each forecast group included in the product

Select template to apply to selected River Forecast Groups

Default template will be applied regardless of current hydrologic condition

Other templates will be applied if current hydrologic conditions warrant otherwise no summary text will appear in the product

Summary Section Settings

Prologue of Summary Section

Templates

FLS_FLM_PROLOGUE

View Edit Template File ☒ Include Prologue

Body of Summary Section

Forecast Groups	Template for Group
SALT FORK ARKANSAS R (03SLFKAR)	DEFAULT
MUDDY BOGGY CREEK (06HUDBOG)	DEFAULT
NORTH FORK RED RIVER (08NFKRED)	DEFAULT

Settings for Selected Forecast Group

Templates

BULLETFLM
DEFAULT
FLOOD_CIM
FLS_FLM

View Edit Template File Apply Template to All Forecast Groups

OK Apply Close

Access this selection from the **Root Window** by *Clicking on Settings, Modify product sections, Summary of Groups.*

Notes:

An example product is shown at the top, the Summary Section Window at the bottom. After making any edits, *Click* OK to incorporate changes and close window, *Click* Apply to incorporate changes and keep the window open. All templates are read-only except in Edit Template File mode.

Hydromet Basis Section Settings Window - Use this selection to modify existing product generation settings for the basis section of the product.

Example basis section (system template)

Default is '...insert basis section here!!!'

Text Editor - riverpro.out.7037

File Edit Format Options Help

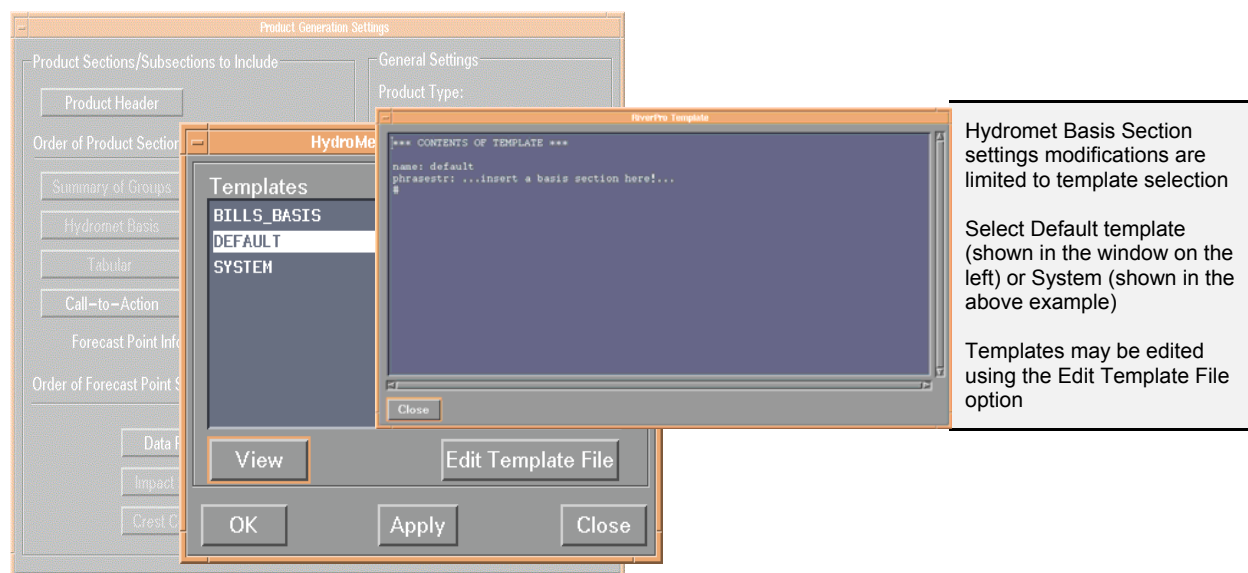
```
OKCWRKOKC
TTAA000 KOKC DDHMM
OKZ018>020-026-180400-
RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
1005 AM CST WED DEC 17 1997

THE CURRENT WEATHER IS DOMINATED BY A [...]. THIS WEATHER SYSTEM
WILL PRODUCE RAINFALL AMOUNTS RANGING FROM [...]. THE EXTENDED
OUTLOOK IS FOR [...].
```

LOCATION	FLD STG	OBSERVED STG	DAY TIME	FORECAST 7AM THU	FRI	SAT
DEEP FORK RIVER						
WARWICK	16	MSG	MSG	MSG	MSG	MSG
KINGFISHER CREEK						
KINGFISHER	20	MSG	MSG	MSG	MSG	MSG
KINGFISHER	24	MSG	MSG	MSG	MSG	MSG
LOWER CIMARRON RIVER						
DOVER	17	MSG	MSG	MSG	MSG	MSG
GUTHRIE	14	MSG	MSG	MSG	MSG	MSG
RIPLEY	17	MSG	MSG	MSG	MSG	MSG

FOR THE DEEP FORK RIVER AT WARWICK, NO OBSERVED STAGE IS AVAILABLE.

DO NOT DRIVE CARS THROUGH FLOODED AREAS...STAY TUNED TO DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO...



Access this selection from the **Root Window** by *Clicking* on **Settings, Modify product sections, Hydromet Basis**.

Notes:

- An example product is shown at the top, the Hydromet Basis Section Window at the bottom.
- After making any edits, *Click* OK to incorporate changes and close window.
- Click* Apply to incorporate changes and keep the window open.
- All templates are read-only except in Edit Template File mode.

Tabular Section Settings Window - Use this selection to modify existing product generation settings for the tabular section of the product.

Example Tabular section (FLS and FLW template)

Text Editor - riverpro.out.7037

File Edit Format Options Help

```

OKCWRKOKC
TTAA00 KOKC DDHMM
OKZ018>020-026-180400-
RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
1005 AM CST WED DEC 17 1997

THE CURRENT WEATHER IS DOMINATED BY A [...]. THIS WEATHER SYSTEM
WILL PRODUCE RAINFALL AMOUNTS RANGING FROM [...]. THE EXTENDED
OUTLOOK IS FOR [...].

```

LOCATION	FLD STG	OBSERVED STG	DAY TIME	FORECAST 7AM THU	PRI	SAT
DEEP FORK RIVER						
WARWICK	16	MSG	MSG	MSG	MSG	MSG
KINGFISHER CREEK						
KINGFISHER	20	MSG	MSG	MSG	MSG	MSG
KINGFISHER	24	MSG	MSG	MSG	MSG	MSG
LOWER CIMARRON RIVER						
DOVER	17	MSG	MSG	MSG	MSG	MSG
GUTHRIE	14	MSG	MSG	MSG	MSG	MSG
RIPLEY	17	MSG	MSG	MSG	MSG	MSG

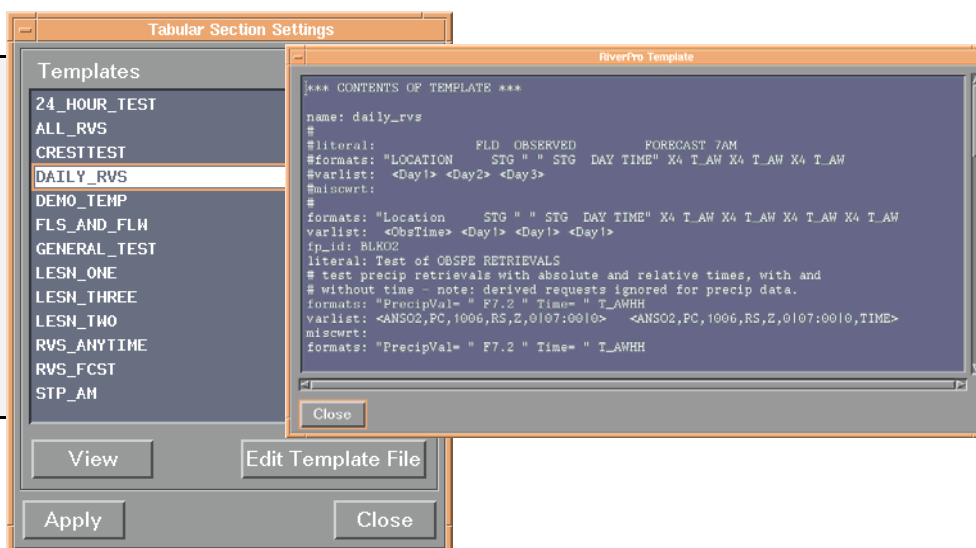
```

FOR THE DEEP FORK RIVER AT WARWICK, NO OBSERVED STAGE IS AVAILABLE.
.
DO NOT DRIVE CARS THROUGH FLOODED AREAS...STAY TUNED TO
DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO...

```

View templates
(daily RVS shown)

Templates used are
based on product
selected



Access this selection from the **Root Window** by *Clicking* on **Settings, Modify product sections, Tabular**.

Notes:

An example product is shown at the top, the Tabular Window at the bottom. After making any edits, *Click* Apply to incorporate changes (the window stays open). *Click* Close to close the window (doesn't save changes - use Apply prior to Close to keep the changes). All templates are read-only except in Edit Template File mode. Forecast points to include in the tabular section are selected in the Select Locations to Include Window.

Call-to-Action Section Settings Window - Use this selection to modify existing product generation settings for the Call-to-Action section of the product.

Example Call-to-Action text (CARDRIVE and NOAARADIO templates)

Text Editor - riverpro.out.7037

File Edit Format Options Help

```

OKCWRKOKC
TTAA00 KOKC DDHMM
OKZ018>020-026-180400-
RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
1005 AM CST WED DEC 17 1997

THE CURRENT WEATHER IS DOMINATED BY A [...]. THIS WEATHER SYSTEM
WILL PRODUCE RAINFALL AMOUNTS RANGING FROM [...]. THE EXTENDED
OUTLOOK IS FOR [...].

LOCATION      FLD  OBSERVED  FORECAST 7AM
STG  STG  DAY TIME  THU    PRI    SAT

DEEP FORK RIVER
WARWICK      16 MSG    MSG      MSG    MSG    MSG

KINGFISHER CREEK
KINGFISHER   20 MSG    MSG      MSG    MSG    MSG
KINGFISHER   24 MSG    MSG      MSG    MSG    MSG

LOWER CIMARRON RIVER
DOVER        17 MSG    MSG      MSG    MSG    MSG
GUTHRIE      14 MSG    MSG      MSG    MSG    MSG
RIPLEY       17 MSG    MSG      MSG    MSG    MSG

FOR THE DEEP FORK RIVER AT WARWICK, NO OBSERVED STAGE IS AVAILABLE.

DO NOT DRIVE CARS THROUGH FLOODED AREAS...STAY TUNED TO
DEVELOPMENTS BY LISTENING TO NOAA WEATHER RADIO...

```

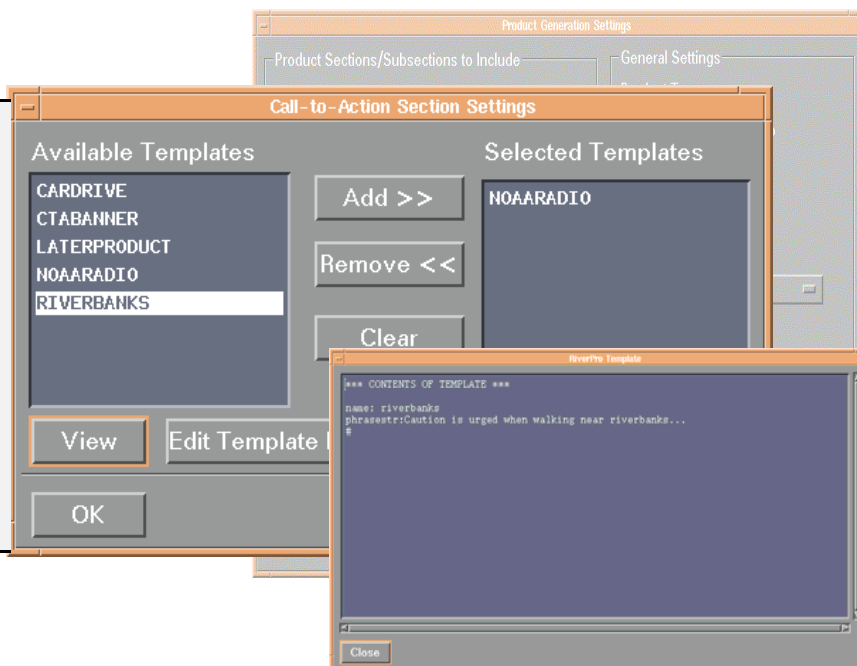
Call-to-Action settings limited to template selection and editing

Highlighted templates can be viewed or edited

Use Add>> or Remove<< to select or deselect templates to be displayed in the product; use Clear to remove all Selected Templates

View and Edit Template File display and edit items in the Available Templates list only

RIVERBANKS template shown to the right



Access this selection from the **Root Window** by *Clicking on Settings, Modify product sections, Call-to-Action.*

Notes: An example product is shown at the top, the Call-to-Action Window at the bottom. This section is unique in that more than one template can be used.

A maximum of 5 templates can be included in the Call-to-Action section.

After making any edits, *Click* OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open.

All templates are read-only except in Edit Template mode.

Data Roundup Subsection Settings Window - Use this selection to modify existing product generation settings for the Data Roundup subsection (part of Forecast Point Info) of the product.

Example Data Roundup Text

```

Text Editor - riverpro.out.6832
File Edit Format Options Help

RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
332 PM CST MON NOV 24 1997

...INSERT BASIS SECTION HERE!!!!..

LOCATION      FLD  OBSERVED      FORECAST 7AM
            STG  STG  DAY TIME    TUE      WED      THU

SALT FORK ARKANSAS R
TONKAWA      17  25.2 MON 02 PM  MSG      MSG      MSG

FOR THE SALT FORK ARKANSAS R ABOVE TONKAWA, MAJOR FLOODING IS
OCCURRING, WITH A STAGE OF 25.2 FEET MEASURED AT 02 PM MONDAY. THE
STAGE EXCEEDED THE FLOOD STAGE OF 17.0 FEET AT 01 PM MONDAY. AT
25.0 FEET, WATER LEVELS WILL BE ABOUT EIGHT FEET ABOVE FLOOD STAGE
OVER RURAL FIELDS AND ROADS ALONG THE SALT FORK OF THE ARKANSAS IN
EASTERN GRANT COUNTY THROUGH KAY COUNTY TO ITS CONFLUENCE WITH THE
ARKANSAS MAINSTEM. MOST FARM LEVEES WILL BE
OVERTOPPED... SOME BREACHED. THE ELECTRICAL POWER SUBSTATION NEAR
TONKAWA MAY BE THREATENED. THE CITY IS NOT. FOUNTAIN ROAD SOUTH
OF TONKAWA AND HIGHWAY 156 BETWEEN MARLAND AND PONCA CITY WILL BE
CLOSED WHILE RIVER STAGES REMAIN ABOVE 20 FEET.. THIS CREST
COMPARES TO A PREVIOUS CREST OF 25.5 FEET ON MAY 11 1993.

```

List of River Forecast Points selected in Client Window

Settings for each point are selected in the window below

Select templates to use for each River Forecast Point either individually or for all points simultaneously

The default templates are a series of different text messages that are triggered by current observations or forecasts

The text of templates can be viewed or edited by *Clicking* View or Edit Template File

Data Roundup Sub-Section Settings

Location	Template for Location
SALT FORK ARKANSAS R	
TON02 - TONKAWA	RVS_DEFAULT
AVA02 - ALVA	RVS_DEFAULT
MUDDY BOGGY CREEK	
FRS02 - FARRIS	RVS_DEFAULT
NORTH FORK RED RIVER	
CAR02 - CARTER	RVS_DEFAULT
HEA02 - HEADRICK	RVS_DEFAULT
TIP02 - TIPTON	RVS_DEFAULT

Settings for Selected Location

Templates

- BULLET_FLH
- CANOE
- DEFAULT
- RVS_DEFAULT
- TESTE19
- TESTSTAGE
- TESTTIME

View Edit Template File Apply Template to All Locations

OK Apply Close

Access the Data Roundup Subsection Settings selection from the **Root Window** by *Clicking* on **Settings, Modify product sections, Forecast Point Info, Data Roundup**.

Notes: An example product is shown at the top, the Data Roundup Window at the bottom. After making any edits, *Click* OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open. All templates are read-only except in Edit Template File mode.

Impact Statement Subsection Settings Window - Use this selection to modify existing product generation settings for the Impact Statement sub-section (part of Forecast Point Info) of the product. The window is used to define the criteria for the selection of impact statements used in the selected product.

Use Impact Statement Search Parameters to adjust the criteria by which RiverPro selects the forecast points and corresponding impact statements used in the product. Set Reference Stage, Stage Window and Maximum Depth below Flood Stage (both define the reference stage range to be considered), and Search Type (selects statement applicable to a stage closest to the reference stage and in the stage window or for the highest stage in the window). All criteria must be met to trigger a forecast point.

List of River Forecast Points selected in the **Select forecast points to include** Window - Selected points for impact statements will be flagged by displaying data in the Impact(s) to Use column. Settings can also be selected manually by clicking on the point identifier. Settings can be de-selected using the Include Forecast Point option below.

Select impact stage or range of stages for the currently highlighted forecast point

View the impact statement to be included in the product (read-only). Only one impact statement is recommended for each River Forecast Point based on the parameters selected, although a range can be manually selected by the user.

Impact Statement Sub-Section Settings

Impact Statement Search Parameters

Reference Stage:

Stage Window:

Maximum Depth below Flood Stage:

Search Type:

Templates

Forecast Points	Impact(s) to Use	CurObs	MaxFcst	Fld Stg
SALT FORK ARKANSAS R				
TON02 - TONKANA	----	5.48	MSG	17.00
AVA02 - ALVA	----	3.96	MSG	14.50
MUDDY BOGGY CREEK				
FRS02 - FARRIS	----	19.95	MSG	43.00
NORTH FORK RED RIVER				
CAR02 - CARTER	16.0 -> 16.0	3.38	MSG	11.00
HEA02 - HEADRICK	----	5.67	MSG	12.00
TIP02 - TIPTON	----	8.78	MSG	16.00

Settings for Selected Forecast Point

ImpactStg	Start	End	Tendency
100.00	01/01	12/31	Rising
18.00	01/01	12/31	Rising
17.00	01/01	12/31	Rising
16.00	01/01	12/31	Rising
15.00	01/01	12/31	Rising
14.00	01/01	12/31	Rising
13.00	01/01	12/31	Rising

Text for Stage:

EXPECT DEEP, WIDESPREAD FLOODING OF FIELDS AND RURAL ROADS IN BECKHAM, GREER AND KIOWA COUNTIES, AND PARK AREAS AROUND THE EDGE OF ALTUS LAKE. STATE HIGHWAY 34 SOUTH OF CARTER WILL FLOOD AS STAGES RISE ABOVE 13.5 FEET.

Access this selection from the **Root Window** by *Clicking* on **Settings, Modify product sections, Forecast Point Info, Impact Statement**.

Notes:

- If there are no impact statements for a forecast point for a selected set of search parameters, that forecast point will not be flagged in the Forecast Point window.
- After making any edits, *Click* OK to incorporate changes and close window.
- Click* Apply to incorporate changes and keep the window open.
- All templates are read-only except in Edit Template File mode.

Crest Comparison Subsection Settings Window - Use this selection to modify existing product generation settings for the Crest Comparison sub-section (part of the Forecast Point Info) of the product. The window is used to define the criteria for the selection of crest comparison statements used in the selected product.

Example Crest Comparison (last sentence)

```

Text Editor - riverpro.out.6832
File Edit Format Options Help

RIVER FLOOD STATEMENT
NATIONAL WEATHER SERVICE OKLAHOMA CITY, OK
332 PM CST MON NOV 24 1997

...INSERT BASIS SECTION HERE!!!!...

LOCATION      FLD  OBSERVED      FORECAST 7AM
            STG  STG  DAY TIME      TUE      WED      THU

SALT FORK ARKANSAS R
TONKAWA      17  25.2 MON 02 PM  MSG      MSG      MSG

FOR THE SALT FORK ARKANSAS R ABOVE TONKAWA, MAJOR FLOODING IS
OCCURRING, WITH A STAGE OF 25.2 FEET MEASURED AT 02 PM MONDAY. THE
STAGE EXCEEDED THE FLOOD STAGE OF 17.0 FEET AT 01 PM MONDAY. AT
25.0 FEET, WATER LEVELS WILL BE ABOUT EIGHT FEET ABOVE FLOOD STAGE
OVER RURAL FIELDS AND ROADS ALONG THE SALT FORK OF THE ARKANSAS IN
EASTERN GRANT COUNTY THROUGH KAY COUNTY TO ITS CONFLUENCE WITH THE
ARKANSAS MAINSTEM. MOST FARM LEVEES WILL BE
OVERTOPPED... SOME BREACHED. THE ELECTRICAL POWER SUBSTATION NEAR
TONKAWA MAY BE THREATENED. THE CITY IS NOT. FOUNTAIN ROAD SOUTH
OF TONKAWA AND HIGHWAY 156 BETWEEN MARLAND AND PONCA CITY WILL BE
CLOSED WHILE RIVER STAGES REMAIN ABOVE 20 FEET.. THIS CREST
COMPARES TO A PREVIOUS CREST OF 25.5 FEET ON MAY 11 1993.

```

Use Crest Comparison Search Parameters to adjust the criteria by which RiverPro selects the forecast points and corresponding crest comparison statements used in the product. Set Reference Stage, Stage Window, Maximum Depth below Flood Stage and Year Lookback (the last three define the reference stage range to be considered), and Search Type. The Search Type options are self-explanatory.

List of River Forecast Points selected in the **Select forecast points to include** Window - selected points for crest comparison statements are highlighted. Settings can also be selected manually by clicking on the point identifier.

List of historical crests in the time period selected in the Year Lookback search parameter.

Crest Comparison Sub-Section Settings

Crest Comparison Search Parameters

Reference Stage:

Stage Window:

Maximum Depth below Flood Stage:

Year Lookback:

Search Type:

Templates

DEFAULT

REF_STGTYPE_COMPARE

REF_STGVAL_COMPARE

Forecast Points

Forecast Points	Crest to Use	CurObs	MaxFest	Fld Stg
SALT FORK ARKANSAS R				
TON02 - TONKAWA		5.48	MSG	17.00
AVA02 - ALVA		3.96	MSG	14.50
HUDDY BOGGY CREEK				
FRS02 - FARRIS		19.95	MSG	43.00
NORTH FORK RED RIVER				
CAR02 - CARTER		3.38	MSG	11.00
HEAD02 - HEADRICK		5.67	MSG	12.00

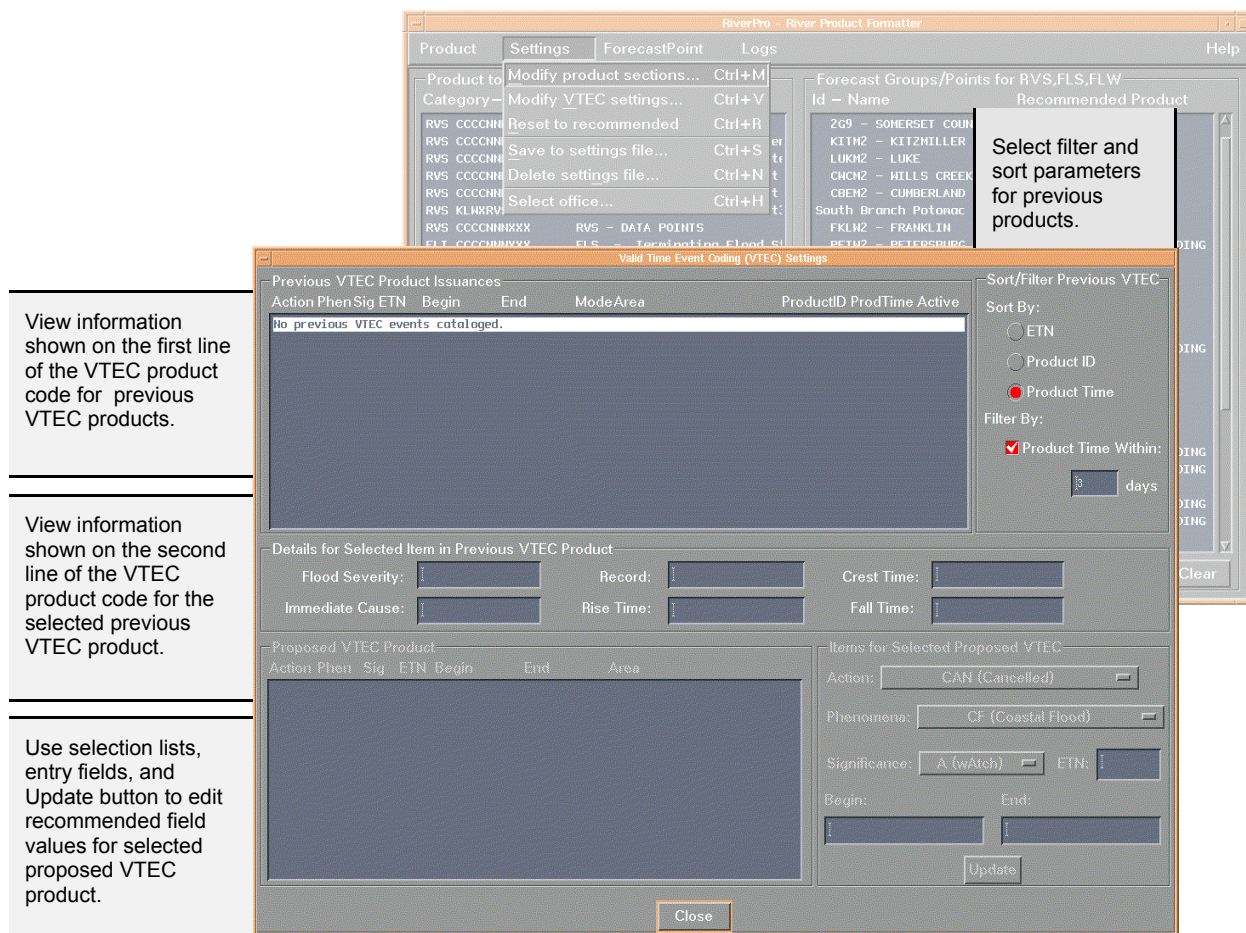
Settings for Selected Forecast Point

CrestStg	CrestDate
51.94	06/17/1945
49.56	10/16/1981
48.73	05/05/1990
48.54	03/27/1977
48.10	02/17/1938
47.99	04/20/1976

Access this selection from the **Root Window** by *Clicking* on **Settings, Modify product sections, Forecast Point Info, Crest Comparison**.

Notes: An example product is shown at the top, the Crest Comparison Window at the bottom. After making any edits, *Click* OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open. All templates are read-only except in Edit Template File mode.

VTEC Settings Window - Use this selection to review previous VTEC events and to propose new VTEC information for segmented products.



Access this selection from the **Root Window** by *Clicking* on **Settings, Modify VTEC Settings**.

Notes:

Once the VTEC fields have proposed values defined for them, they are not reset for the given VTEC entity (forecast point, group, or county) if the **Update** button is used. This ensures that user changes are preserved. After any **Update**, the values for the VTEC entity are reset by the program if they have been "missing." The reset to missing occurs for two cases: (1) when switching the segment mode in the Product Sections (this includes switching between "no segmenting" and any of the three segment modes) and (2) when loading a product definitions file.

The program intentionally sets the recommended values for a minimal number of actions, in order to allow the preservation of user changes to the recommended values. This behavior has a notable effect on the event tracking number (ETN) selected, because the program uses the next available ETN for new events. For example, if ETNs 43-47 are used for a 5-segment product, and the user decides that segments 44-46 should not be included in the product, then ETNs 43 and 47 will remain and ETNs 44-46 will be unused. The ETN field allows the user to modify the ETNs interactively.

Save Product Settings Window - Use this selection to save a new set of product section/subsection definitions for future use. Use after modifying section(s) and/or subsection(s) for a product.

Currently selected Product to Generate and corresponding file name from the RiverPro Root Window

List Sequence Number allows the user to define the order in which the products will appear on the main RiverPro interface

Complete to save as a new definition set. Complete description and file naming accurately, as a new definition set can be saved as a new Product to Generate and can be accessed through the Product to Generate section of the Root Window. The new definition set can also be saved to the currently named file by entering the same file name (caution, it will overwrite).

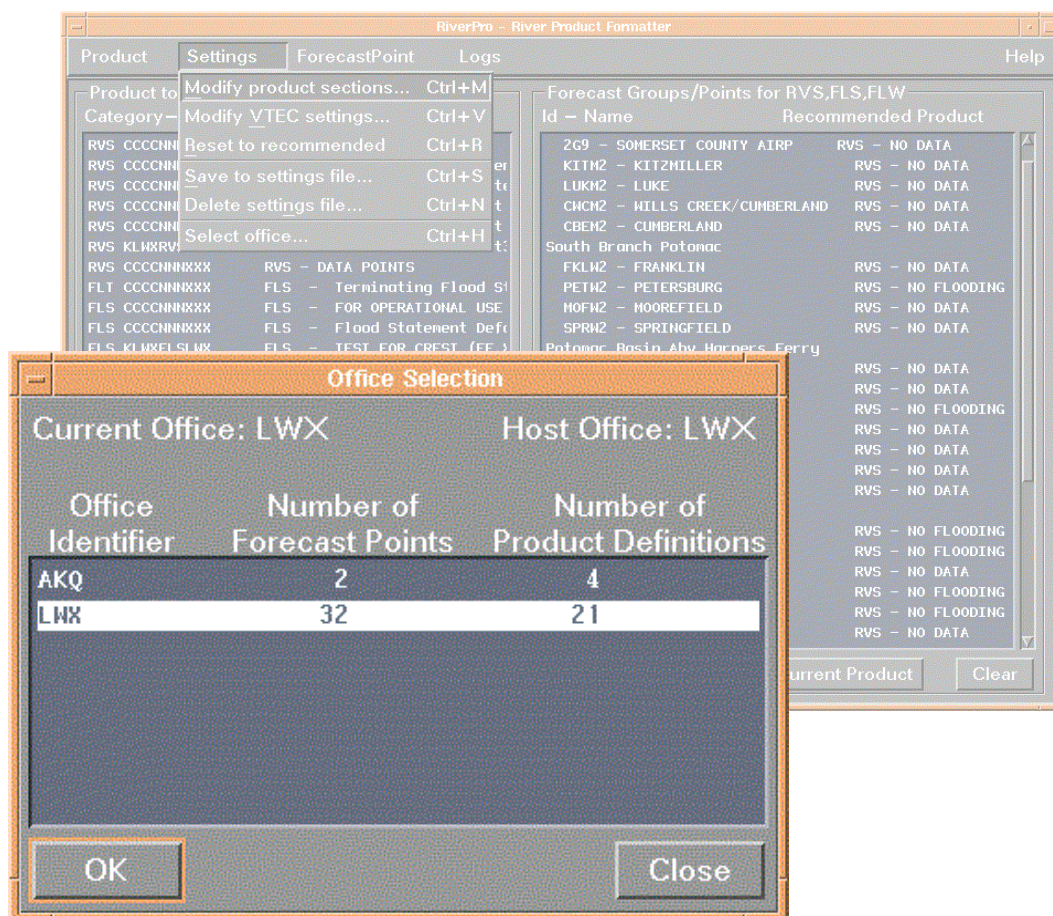
See **Notes** below for Save Instructions... check box

Access this selection from the **Root Window** by *Clicking on Settings, Save to Settings File.*

Notes: The file name should always begin with the product name (e.g., RVS) and end with .pcc. If a previously chosen file name is entered and OK is selected, a confirmation window will ask if the file is to be overwritten.

Checking the Save Instructions for Including Specific Forecast Points box allows the user to always include the same subset of forecast points in the product, by highlighting those points in the forecast point list. When saving the product settings with the box checked, those forecast points become part of the product definition.

Select Office Window - Use this selection to specify the office for which products are to be generated.

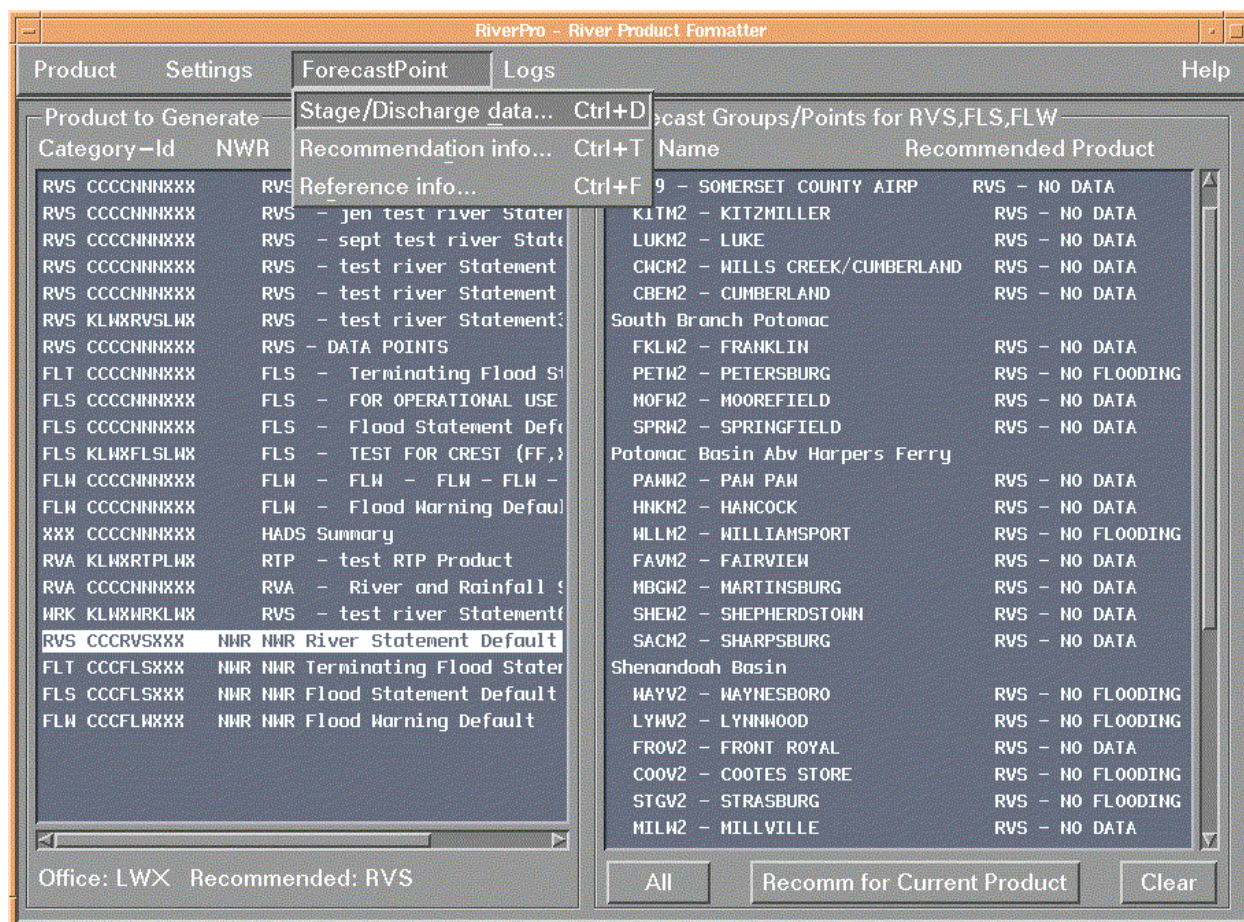


Access this selection from the **Root Window** by *Clicking* on **Settings, Select Office**.

Notes: Normally, three office options are available for selection: the default office, the office for which the default office is the primary backup, and the office for which the default office is the secondary backup.

Changing the office selection automatically changes the list of defined products in the left portion of the **Root Window** and the list of forecast points in the right portion of the **Root Window** to reflect those defined for the selected office.

RiverPro Root Window (ForecastPoint selected from the Menu Bar) - Use this selection to view stage and product reference data and information.



Notes:

Use **Stage/Discharge Data** to display observed, forecast, and threshold (E-19) stages for selected points.

Use **Recommendation Info** to display recommended products for forecast points, review RiverPro recommendation rationale, update recommendations, clear a Terminating FLS, and display previously issued products for a selected point.

Use **Reference Info** to display data and information from the E-19 data base for a selected point.

Stage/Discharge Information Window - Use this selection to view current observed, forecast, and threshold (E-19) stage data for a selected point.

Select **All Points** or **Included Points** (those forecast points recommended by RiverPro or manually selected in the **Select forecast points to include** Window)

Click on a forecast point to display data below

RiverPro - River Product Formatter

Product Settings ForecastPoint Logs Help

Product to Generate: Stage/Discharge data... Ctrl+D

Category-Id: NWR Recommendation info... Ctrl+T

Reference info... Ctrl+F

Forecast Groups/Points for RVS,FLS,FLW

Name	Recommended Product
9 - SOMERSET COUNTY AIRP	RVS - NO DATA
KITM2 - KITZMILLER	RVS - NO DATA
LUKM2 - LUKE	RVS - NO DATA
CHCM2 - HILLS CREEK/CUMBERLAND	RVS - NO DATA
CBEN2 - CUMBERLAND	RVS - NO DATA
South Branch Potomac	RVS - NO DATA
FKLM2 - FRANKLIN	RVS - NO DATA
PETM2 - PETERSBURG	RVS - NO FLOODING
MOFM2 - MOOREFIELD	RVS - NO DATA
SPRM2 - SPRINGFIELD	RVS - NO DATA
Potomac Basin Abv Harpers Ferry	RVS - NO DATA
PAHM2 - PAH PAH	RVS - NO DATA
HNKM2 - HANCOCK	RVS - NO DATA
HLLM2 - HILLIAMSPOINT	RVS - NO FLOODING
FAVM2 - FAIRVIEW	RVS - NO DATA

Forecast Point Stage/Discharge Information

List: ☒ Included Points

Forecast Points	Record	FldLevel	CurrentObserved	MaxForecast	MaxCategory
SALT FORK ARKANSAS R					
TONO2 - TONKANA	29.0	17.0	5.48 12/29-Fri-16:00	MSG	NO-FLOOD
AVA02 - ALVA	MSG	14.5	3.96 12/29-Fri-15:30	MSG	NO-FLOOD
UPPER CIMAARON RVR					
HANO2 - HAYNOKA	15.1	8.0	6.06 12/29-Fri-16:00	MSG	NO-FLOOD
CLEAR BOGGY CREEK					
CNE02 - CANEY	26.8	19.0	18.78 12/28-Thu-23:05	11.40 12/30-Sat-00:00	NO-FLOOD
MUDDY BOGGY CREEK					
FRS02 - FARRIS	51.9	43.0	19.95 12/29-Fri-17:30	MSG	NO-FLOOD

Values for Selected Location

ObsValue	TimeZ	Category	TypSrc	FestValue	TimeZ	Category	TypSrc	CreateTime
5.48	12/29-Fri-16:00	NO-FLOOD	RG					
5.46	12/29-Fri-15:30	NO-FLOOD	RG					
5.44	12/29-Fri-15:00	NO-FLOOD	RG					
5.44	12/29-Fri-14:30	NO-FLOOD	RG					
5.45	12/29-Fri-14:00	NO-FLOOD	RG					
5.45	12/29-Fri-13:30	NO-FLOOD	RG					
5.45	12/29-Fri-13:00	NO-FLOOD	RG					

Obs Trend: ☒ RISING

Overall Trend: ☒ RISING

AboveFlood: 17.00 N/A View Table AboveFlood: MSG

BelowFlood: 17.00 N/A View Graph BelowFlood: MSG

Threshold Values for Selected Location

Major, Moderate, Minor: 25.0 20.0 17.0 Action: 14.0 Bankfull Stage: 17.0 Zero Datum: 930.2

Close

Use View Table or View Graph to launch the time series display (graphic or tabular, respectively)

Access this selection from the **Root Window** by *Clicking* on **ForecastPoint, Stage/Discharge data**.

Notes: This display is read-only.

Recommendation/Previous Product Information Window - Use this selection to view RiverPro recommended products and recommendation rationale, update recommendations, list previous products, and clear terminating flood statements.

Select river forecast points to list. The list can be filtered as shown in the pull-down screen above. Included points are those selected manually in the Select Locations to Include Window. The **Recommended Product/Reason** column provides the rationale for the RiverPro recommendations.

Columns are also provided for the maximum stage category for the forecast point, the previously issued product, and an indicator on whether a categorical rise has occurred since the previous product was issued. These three values are used to determine the recommended product and the reason for the selection.

The counts section displays a count of the number of Included forecast points for the flood categories.

The Recommended Product and list of previous products are displayed for the highlighted forecast point. The RiverPro recommendations can be refreshed using the left **Recompute...** button. The right **Clear...** button clears the recommendations for terminating flood statements. The **Recompute...** button loads the latest data and recomputes the recommendations. This action is needed to load data that has arrived since the program was started.

Access this selection from the **Root Window** by *Clicking* on **ForecastPoint, Recommendation info**.

Notes: This display is read-only.

Reference Information Window - Use this selection to view the static E-19 data for each forecast point.

Select river forecast points to list. List can be filtered using pull-down menu. *Clicking* on a given forecast point will display more detailed information below, including zones, states and counties, and NOAA Weather Radio Towers associated with the forecast point.

RiverPro - River Product Formatter

Product Settings ForecastPoint Logs Help

Product to Generate: Stage/Discharge data... Ctrl+D
 Category: Id NWR Recommendation info... Ctrl+T Name Recommended Product

Forecast Groups/Points for RVS,FLS,FLW	Recommended Product
RVS CCCNNNNXX RVS - Reference info... Ctrl+F 9 - SOMERSET COUNTY AIRP	RVS - NO DATA
RVS CCCNNNNXX RVS - jen test river State	KITH2 - KITZHILLER RVS - NO DATA
RVS CCCNNNNXX RVS - sept test river State	LUKH2 - LUKE RVS - NO DATA
RVS CCCNNNNXX RVS - test river Statement	CHCH2 - HILLS CREEK/CUMBERLAND RVS - NO DATA
RVS CCCNNNNXX RVS - test river Statement	CBEH2 - CUMBERLAND RVS - NO DATA
RVS KLHRRVSLHX RVS - test river Statement	South Branch Potomac
RVS CCCNNNNXX RVS - DATA POINTS	EKLH2 - FRANKLIN RVS - NO DATA

Reference Information

List All Points Included Points

Forecast Points County

Info for Selected Forecast Point

River: Proximity:

Name: State:

River Group:

Associated Zones Associated Counties

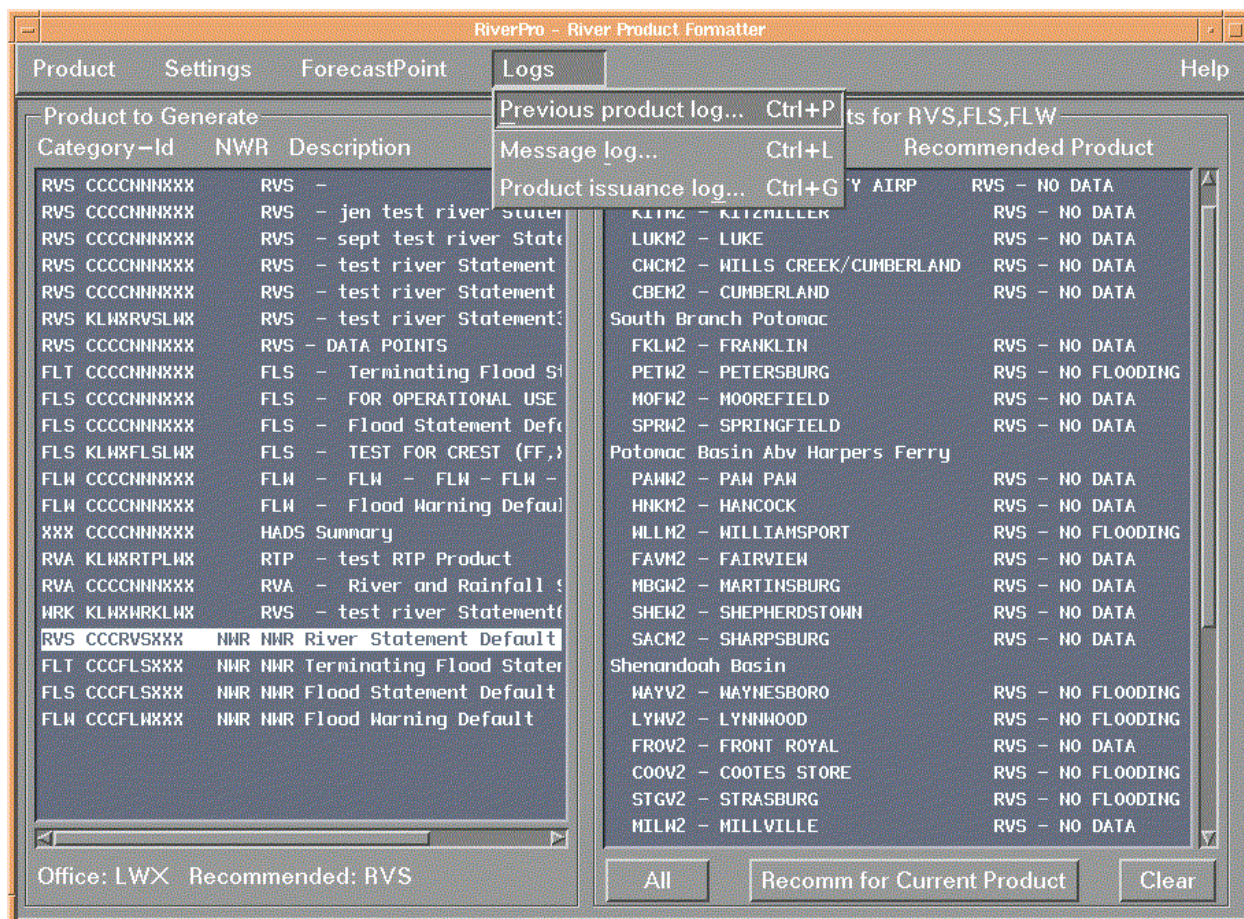
State	Zone	Description	Name	State	FIPS Num

Close

Access this selection from the **Root Window** by *Clicking* on **ForecastPoint, Reference info.**

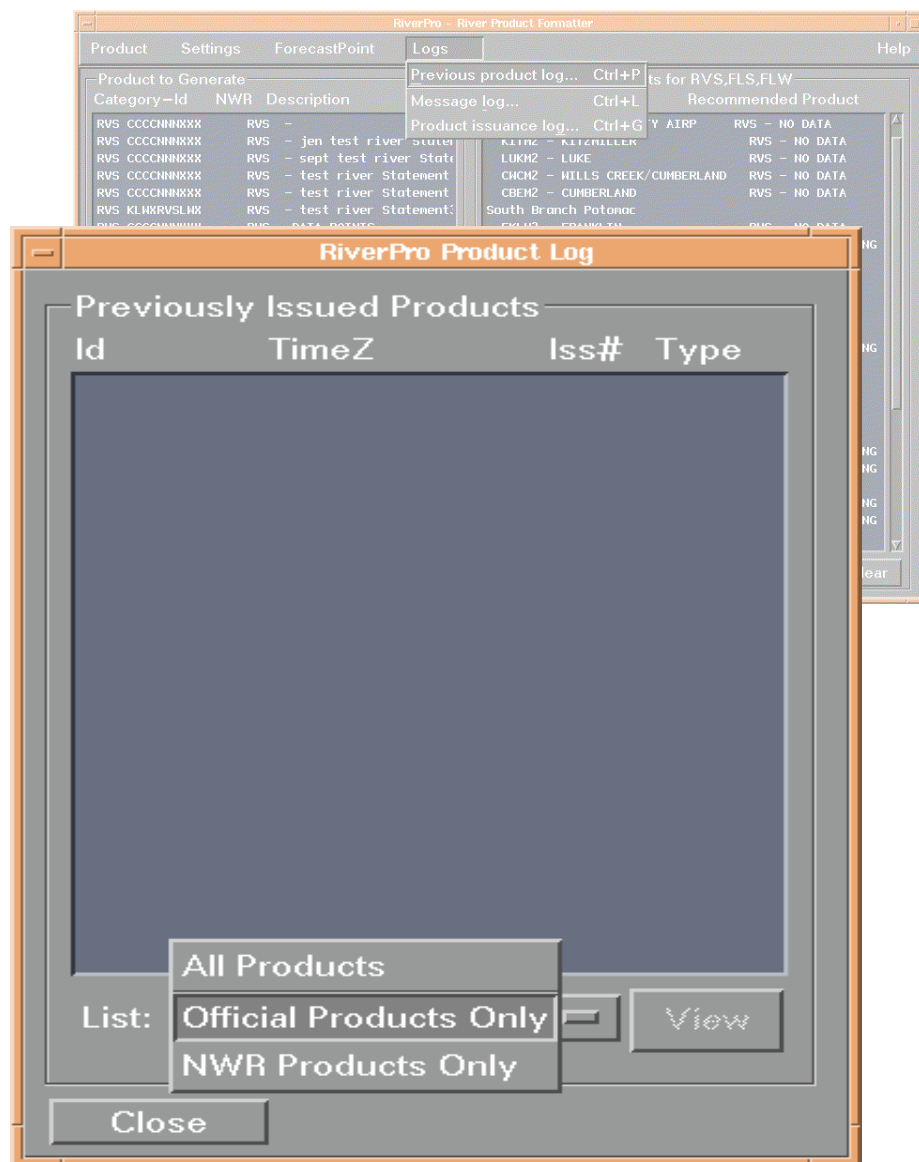
Notes: This display is read-only.

RiverPro Root Window (Logs selected from the Menu Bar) - Use this selection to view product, message, and product issuance logs generated by RiverPro.



Access this selection from the **Root Window** by *Clicking* on **Logs**.

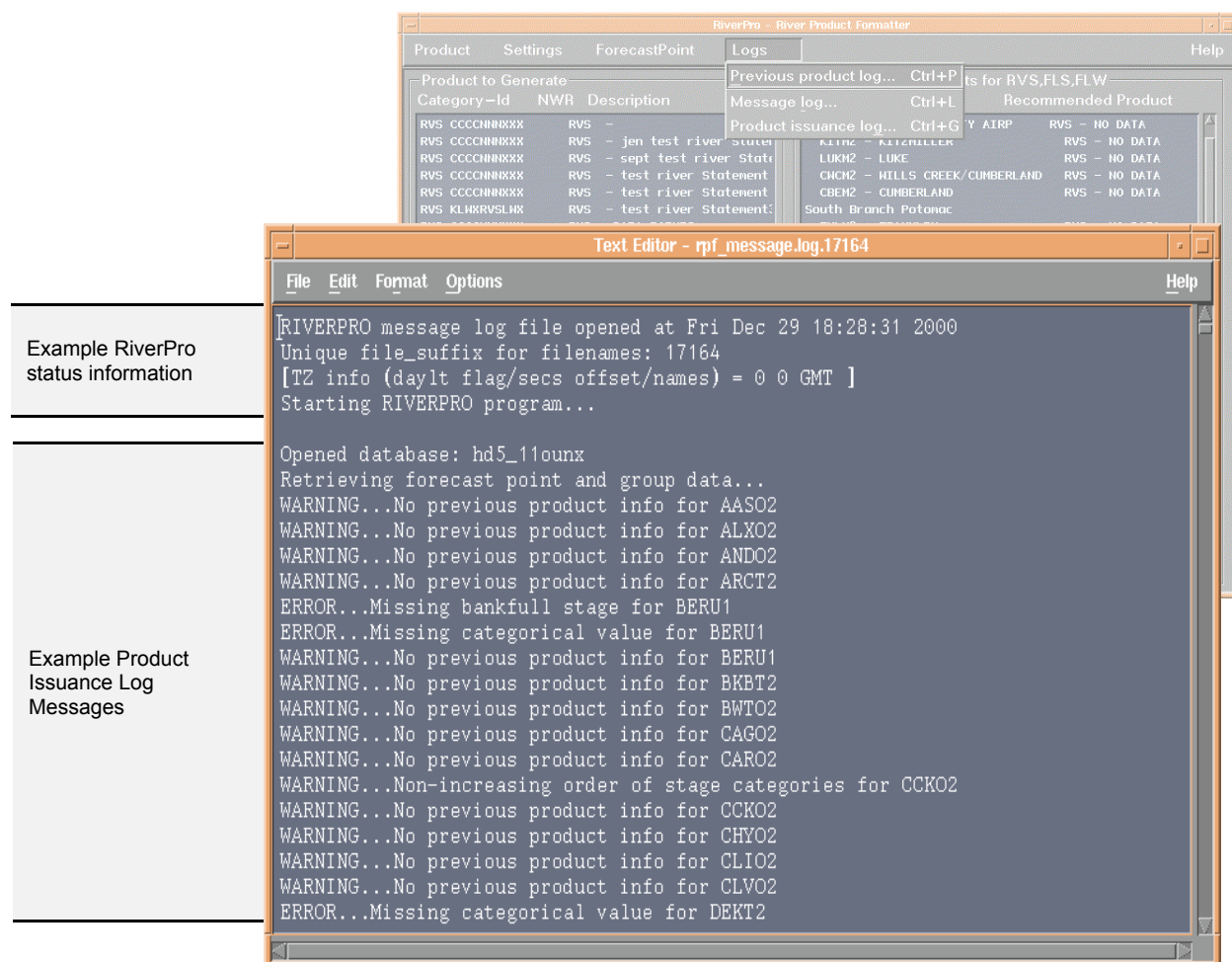
RiverPro Product Log Window - Use this selection to view a listing of previously-issued products generated by RiverPro.



Access this selection from the **Root Window** by *Clicking* on **Logs, Previous product log**.

Notes: This display is read-only.

Message Log Window - Use this selection to view the general status information (indicating specific steps of the current RiverPro execution) as well as messages in the **Product Issuance Log** (following window).

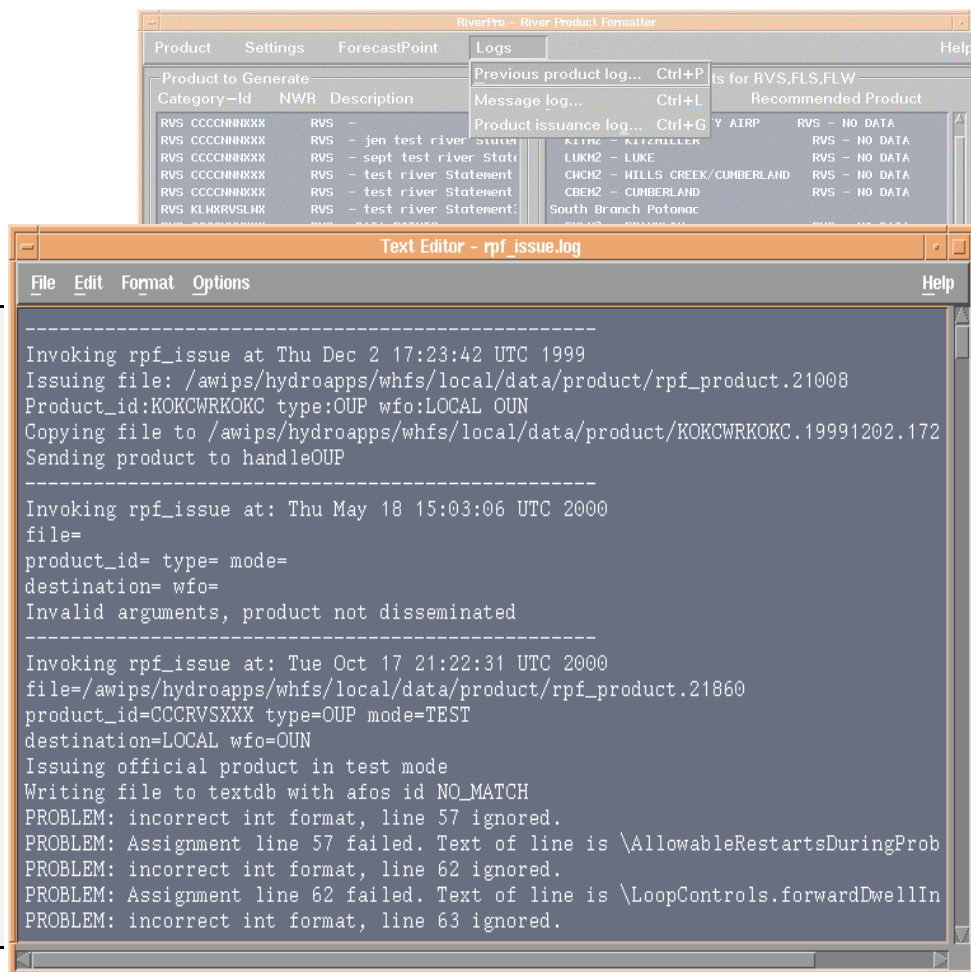


Access this selection from the **Root Window** by *Clicking* on **Logs, Message log**.

Notes: This display is read-only.
The log file being displayed is shown above the menu bar.

Product Issuance Log Window - Use this selection to view the messages generated during attempts to issue products including warning messages that indicate possible detrimental conditions (i.e., warnings), definite detrimental conditions (i.e., errors), and unrecoverable (fatal) errors.

Sample product
issuance error,
warning, and
informational
messages



Access this selection from the **Root Window** by *Clicking* on **Logs, Product issuance log**.

Notes: This display is read-only.
The log information displayed in this window can be extremely helpful in identifying problems and their causes.
The log file being displayed is shown above the menu bar.

The RiverPro Operations Guide provided below is designed to provide the user with a quick reference summary of the primary features of RiverPro and how to access them. The RiverPro Functional Guide, which follows the Operational Guide, provides more details on the procedures to perform various functions in RiverPro.

RiverPro Operations Guide

Operation	Window to Use	Getting to the Window
Create a New Product (RiverPro Recommended Product)	Text Editor	<p>Start - Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Create</p> <p>The current RiverPro recommended product will be displayed.</p> <p>The product can be edited as needed.</p>
Create a New Product for User-defined Product and Groups/Forecast Points	Text Editor	<p>Start - Root Window</p> <p>Select - Clear, in right portion of Root Window (clears RiverPro recommended forecast points)</p> <p>Click - Groups/Forecast Points to include in the product from the Forecast Groups/Points for RVS, FLS, FLW section of the window</p> <p>Click - Product type to issue from the Product to Generate section of the Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Create</p> <p>The selected product will be displayed. Edit as necessary and exit from the editor. The product is now available to issue or re-edit and issue.</p>

RiverPro Operations Guide

Operation	Window to Use	Getting to the Window
Issue the Most Recently Created Product	Product Issue Confirmation Window	<p>Start - Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Issue</p> <p>The Product Issue Confirmation Window will be displayed. Select OK to issue the most recently created product. Select CANCEL to close the window without issuing the product.</p>
Test the Issuance of the Most Recently Created Product	Product Issue Test Mode Confirmation Window	<p>Start - Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Issue Test</p> <p>The Product Issue TEST Mode Confirmation Window will be displayed. Select OK to issue the most recently created product to the test database. Select CANCEL to close the window without issuing the product to the test database.</p>
Issue a Previously Edited and Saved Produce	Text Editor	<p>Edit a previous product (or create a new product) and save the product (remember the saved file name and directory to where it was saved). (Call this File XX)</p> <p>Start - Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Create</p> <p>The most recently created product (File YY) will be displayed.</p> <p>Delete the entire text of the product (File YY).</p> <p>Using the Include command in the text editor, replace the text with the previously saved, edited file (File XX).</p> <p>(Continued on the next page.)</p>

RiverPro Operations Guide

Operation	Window to Use	Getting to the Window
Issue a Previously Edited and Saved Product (cont.)	Text Editor	<p>Use the Save command in the text editor. The file will now be saved with the same identifier as the most recently created product (File YY). This is necessary to be able to issue the edited file (File XX). In other words, File XX must be given the identity of the most recently created file (File YY) in order to issue it.</p> <p>Exit the text editor.</p> <p>Select - Product (Menu Bar)</p> <p>Select - Issue or Issue Test</p> <p>Follow the dialogue box prompts to issue the file.</p>
Modify Product Generation Settings (product section/subsection format and content)	Settings Window (Modify Initial Screen)	<p>Start - Root Window</p> <p>Select - Settings (Menu Bar)</p> <p>Select - Modify product sections</p> <p>Click - Setting(s) of choice to modify (see RiverPro Functional Guide and RiverPro Settings Option - Modify section)</p>
Save Modified Product Generation Settings (section/subsection format)	Save Product Settings Window	<p>After making any required modifications to section/subsection settings, <i>click</i> Apply then Close to return to the RiverPro Root Window.</p> <p>Select - Settings (Menu Bar)</p> <p>Select - Save to settings file</p> <p>The Save Product Settings Window will be displayed.</p>
View Various Supporting Data and Information (Stage/Discharge Data, Recommendation Info, Previous Products Issued, Form E-19 Info)	<p>Stage/Discharge Information Window</p> <p>Recommendation/Previous Product Information Window</p> <p>Reference Information Window</p>	<p>Start - Root Window</p> <p>Select - ForecastPoint (Menu Bar)</p> <p>Select - Data or information of choice to view</p>

RiverPro Operations Guide

Operation	Window to Use	Getting to the Window
View RiverPro Message Log	Message Log Window	Start - Root Window Select - Logs (Menu Bar) Select - Message log
View RiverPro Product Issuance Log	Product Issuance Log Window	Start - Root Window Select - Logs (Menu Bar) Select - Product issuance log
Set Up to Generate Products for a Different Office	Select Office Window	Start - Root Window Select - Settings (Menu Bar) Select - Select office Select the desired office identifier and click on OK.
Exit RiverPro	RiverPro Root Window	Start - Root Window Select - Product (Menu Bar) Select - Exit

The following RiverPro Functional Guide provides examples of various functions that can be performed in RiverPro. This guide can be used as an application tool to exercise some of the more pertinent RiverPro capabilities.

RiverPro Functional Guide

Function	Window to Use	Procedure
Create, Edit and Issue a RiverPro Recommended Product Using Default Product Generation Settings (default section/subsection settings)	Text Editor Product Issue Confirmation Window	<p>Start - Root Window</p> <p>The product to issue will be displayed in the left portion of the Root Window.</p> <p>The forecast points to include will be highlighted in the right portion of the Root Window.</p> <p>Select - Product (Menu Bar)</p> <p>Select - Create</p> <p>The product to be issued will be displayed in the Text Editor. Edit, if needed, including the addition of the Hydromet Basis section for an FLS or FLW. An edited product must be saved before it can be issued.</p> <p>Exit from the Text Editor - Click on File in the Text Editor Menu Bar, then on Close. (Return to the Root Window)</p> <p>Select - Product (Menu Bar)</p> <p>Select - Issue</p> <p>Click OK in the Product Issue Confirmation Window to issue.</p>
View the Most Recently Created Product	Text Editor	<p>Start - Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Edit</p> <p>The most recently created product will be displayed.</p> <p>To exit, Click on File in the Text Editor Menu Bar, then on Close.</p>

RiverPro Functional Guide

Function	Window to Use	Procedure
Create and Edit a RiverPro Recommended Product Using Modified Product Generation Settings	Product Generation Settings Window Text Editor	<p>Start - Root Window</p> <p>The product to issue will be displayed in the left portion of the Root Window.</p> <p>The forecast points to include will be highlighted in the right portion of the Root Window.</p> <p>Select - Settings (Menu Bar)</p> <p>Select - Modify product sections</p> <p>The Product Generation Settings Window will be displayed. Click on product section or subsection to modify. Modify section and/or subsection following the procedures for the selected window. Toggle 1st, 2nd, 3rd ... buttons to include or exclude a section or subsection or to re-arrange their order in the product. Specify product type and available product type options. After making any modifications, Click OK (or Apply then Close if OK is not available) in the section or subsection window (Returns to the Product Generation Settings Window)</p> <p>Click Apply, then click Close (Return to Root Window)</p> <p>Select - Product (Menu Bar)</p> <p>Select - Create</p> <p>The product can now be edited and will be displayed in the Text Editor. Edit, if needed, including the addition of the Hydromet Basis section for an FLS or FLW. An edited product must be saved before it can be issued.</p> <p>Exit from the Text Editor - Click</p> <p>(Continued on the next page.)</p>

RiverPro Functional Guide

Function	Window to Use	Procedure
Create and Edit a RiverPro Recommended Product Using Modified Product Generation Settings (cont.)	Product Generation Settings Window Text Editor	on File in the Text Editor Menu Bar , then on Close . (Return to the Root Window).
Create an RVS - River Statement Default for User-Specified River Groups and Forecast Points	Text Editor	<p>Start - Root Window</p> <p>Click - RVS - River Statement Default in the Product to Generate section (left portion) of the Root Window</p> <p>Click - Desired river groups or forecast points to include in the right portion of the Root Window</p> <p>Select - Product (Menu Bar)</p> <p>Select - Create</p> <p>The product can now be edited and will be displayed in the Text Editor. Edit, if needed, including the addition of the Hydromet Basis section for an FLS or FLW. An edited product must be saved before it can be issued.</p> <p>Exit from the Text Editor - Click on File in the Text Editor Menu Bar, then on Close. (Return to the Root Window)</p>
Create a New RiverPro Product Using Modified Product Generation Settings and Save the New Product for Future Use	Product Generation Settings Window Text Editor Save Product Settings Window	<p>Start - Root Window</p> <p>The suggested product to issue will be highlighted in the Product to Generate section (left portion) of the Root Window. The forecast points to include will be highlighted in the right portion of the Root Window.</p> <p>Select - Settings (Menu Bar)</p> <p>Select - Modify product sections</p> <p>(Continued on the next page.)</p>

RiverPro Functional Guide

Function	Window to Use	Procedure
<p>Create a New RiverPro Product Using Modified Product Generation Settings and Save the New Product for Future Use (cont.)</p>	<p>Product Generation Settings Window</p> <p>Text Editor</p> <p>Save Product Settings Window</p>	<p>The Product Generation Settings Window will be displayed. Click on product section or subsection to modify. Modify section and/or subsection following the procedures for the selected window. Toggle 1st, 2nd, 3rd buttons to include or exclude a section or subsection or to re-arrange their order in the product. Specify product type and available product type options. After making any modifications, Click OK (or Apply then Close if OK is not available) in the section or subsection window (Returns to the Product Generation Settings Window)</p> <p>Click Apply, then click Close (Return to Root Window)</p> <p>Select - Settings (Menu Bar)</p> <p>Select - Save to settings file</p> <p>The Save Product Settings Window will be displayed.</p> <p>Type in a new file name in the <u>Save Settings As</u> section of the Save Product Settings Window (file name should have a .pcc extension and start with the abbreviation of the product name; e.g., RVS). Type in a description (the description must begin with the product identifier; e.g., RVS, FLS, FLW). Update the List Sequence Number if this product is an iteration of another product with the same Product ID. Determine whether to have the instructions for including forecast points saved as part of the product and toggle the <u>Save Instructions for including Specific Forecast Points</u> button if so desired.</p> <p>(Continued on the next page.)</p>

RiverPro Functional Guide

Function	Window to Use	Procedure
Create a New RiverPro Product Using Modified Product Generation Settings and Save the New Product for Future Use (cont.)	Product Generation Settings Window Text Editor Save Product Settings Window	Click OK to save the new product. Product description will appear in the <u>Product to Generate</u> section of the RiverPro Root Window .
Change Product Expiration Date and Time and Issuance Number (displayed in product header)	Product Header Settings Window	Start - Root Window Select - Settings Select - Modify sections Click on Product Header . Product Header Settings Window will be displayed. Modify Expiration Date, TimeZ, Issuance Number. Click on Apply to save the changes then click on Close to return to the Product Generation Settings Window .
Reset All Product Generation Settings to RiverPro Recommended Settings While in an Active RiverPro Session (Note that this occurs automatically when exiting/entering RiverPro.)	RiverPro Root Window	(Assuming modifications have been made to either products to generate, river forecast points to include, and/or section/subsections included in the product) Start - Root Window Select - Settings Select - Reset to recommended
View RiverPro Recommendation Information	Recommendation/Previous Product Information Window	Start - Root Window Select - ForecastPoint Select - Recommendation info Click on pull down menu under List and then Click on recommendation type of choice. Selected list will appear in window.

RiverPro Functional Guide

Function	Window to Use	Procedure
Recompute RiverPro Recommendations Using Up-to-Date Data (may be necessary if logged in to RiverPro for an extended period of time)	Recommendation/Previous Product Information Window	<p>Start - Root Window</p> <p>Select - ForecastPoint</p> <p>Select - Recommendation info</p> <p>Click - <u>Recompute Recommendations Using Latest Data</u> (lower left of window)</p>
Clear Terminating Flood Statements (RiverPro may not necessarily do this automatically)	Recommendation/Previous Product Information Window	<p>Start - Root Window</p> <p>Select - ForecastPoint</p> <p>Select - Recommendation info</p> <p>Click - <u>Clear Recommendations for Terminating FLS</u> (lower right of window)</p> <p>A Clear FLT Recommendations confirmation window will be displayed. Click OK to clear and reset Terminating FLS recommendations. Carryover information (i.e., information regarding any previous products such as stage information) is also modified.</p>